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Report 1070-02-79-CR

Analysis to Determine Functional and Systems Requirements for an On-Line Structure and Composition System (SACS)

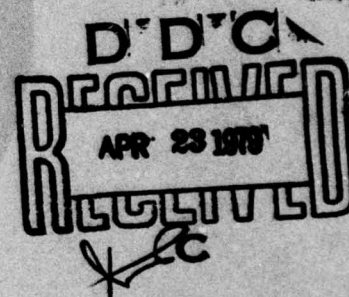
Report of Task C Data Analysis of Accuracy and Timeliness

By

Francis O. Deppner
John J. Anderson
Jack I. Posner
Whitney C. Scully

Contract No. MDA903-78-C-0445

March 1979



OPERATIONS ANALYSIS GROUP

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Force Accounting and Systems Division
Office of the Deputy Chief of Staff for Operations and Plans
Washington, D.C. 20310

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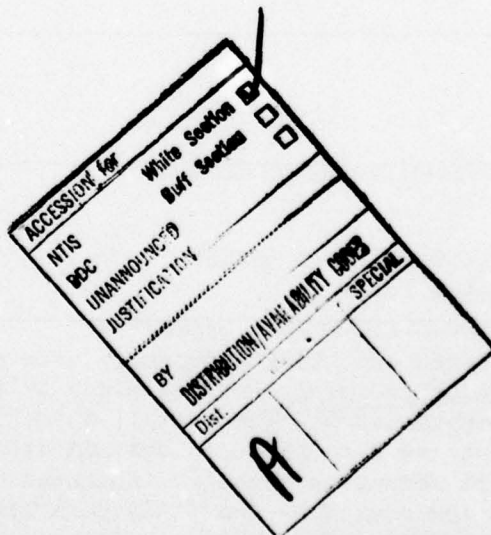
REPORT OF TASK C - ANALYSIS OF ACCURACY AND TIMELINESS

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The Army Authorization Document System (TAADS)
Basis of Issue Plan (BOIP)
Table of Organization and Equipment (TOE)
Automated Unit Reference Sheet (AURS)
Shorthand Note System (SHN)
Personnel Structure and Composition System (PERSACS)
Logistics Structure and Composition System (LOGSACS)
Data Accuracy
Data Timeliness

Block 20.

cont → established by the management of change (MOC) study which
does not constrain data flow in all force structure systems.



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EXECUTIVE SUMMARY

This report covers Task C, "Analyze the accuracy and timeliness of available data used in the current LOGSACS and PERSACS" of a study to determine requirements for an On-Line Structure and Composition System (SACS).

The basis for evaluating timeliness and accuracy of the SACS products were:

- Produce SACS products in time to influence current day-to-day decisions.
- Produce SACS products containing complete unit, personnel, and equipment data for a specific "as of" date that are 100% accurate in representing the Master Force as selected by the SACS criteria.

Section 3 and the appendices of the report identify a number of specific timeliness and accuracy problems. The problems range from data field omissions, to complete unit omissions to data errors and data untimeliness. The data inaccuracies are primarily caused by the lack of complete data edits and audits, lack of effective systems configuration control, and lack of a SACS feedback/corrective mechanism.

The study team concluded that SACS data are neither timely nor accurate for all M Force units selected to be in the SACS products.

Recommendations are that stringent edits be established for data that flows to SACS; that an effective audit concept be implemented; that a SACS configuration control concept be implemented; and that a feedback/correction concept be implemented.

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ABBREVIATIONS AND ACRONYMS

AAO	Army Acquisition Objective
ACC	US Army Communications Command
ADCON	Administrative Control Code
AESRS	Army Equipment Status Reporting System
AFP	Army Force Program
AOC	Army Operations Center
ARSTAF	Army Staff
AS	Authorization Subsystem
AUDB	Authorizations Data Base
AUTS	Automated Update Transaction System
BOIMARS	Basis of Issue Monitoring and Recording Systems
BOIP	Basis of Issue Plan
Br	Branch
CBS	Civilian Budgeting System
CCT	Consolidated Change Table
COMPO	Component Code
CONUS	Continental United States
CPU	Central Processing Unit
CSR	Chief of Staff Regulations
DAMPL	Department of the Army Master Priority List
DAPPL	Department of the Army Planning Priority List
DARCOM	US Army Materiel Development and Readiness Command
DBMS	Data Base Management System
DCSLOG	Deputy Chief of Staff for Logistics
DCSOPS	Deputy Chief of Staff for Operations and Plans
DCSPER	Deputy Chief of Staff for Personnel
DCSRDA	Deputy Chief of Staff for Research, Development, and Acquisition
DEPLO	Deployment Location Code

DESCOM	US Army Depot System Command
DPMNT	Deployment
DPS	Decision Package Set
EARA	US Army Equipment Authorization Review Activity
EDATE	Effective Date
ERC	Equipment Requirement Code
FAS	Force Accounting System
FDMIS	Force Development Management Information System
FICOD	Force Identification Code
FORDIMS	Force Development Integrated Management System
FSS	Force Structure Subsystem
FYDP	Five Year Defense Plan
Gd	Grade
HQDA	Headquarters Department of Army
H-530	Equipment Validation Report (prepared at DESCOM from LOGSACS data)
IIQ	Initial Issue Quantity
ITAADS	Installation TAADS
JCS	Joint Chiefs of Staff
LEA	US Army Logistics Evaluation Agency
LIN	Line Item Number
LOGSACS	Equipment (Logistics) Structure and Composition System
MACOM	Major Command
MILPERCEN	US Army Military Personnel Center
MIS	Management Information System
MOC	Management of Change
MOS	Military Occupational Specialty
MRC	US Army Materiel Readiness Command
MTOE	Modified Table(s) of Organization and Equipment
NATO	North Atlantic Treaty Organization
ODCSLOG	Office, Deputy Chief of Staff for Logistics

ODCSOPS	Office, Deputy Chief of Staff for Operations and Plans
ODCSPER	Office, Deputy Chief of Staff for Personnel
ODCSRDA	Office of the Deputy Chief of Staff for Research, Development, and Acquisition
OPAGY	Operating Agency
OSD	Office of the Secretary of Defense
PAAS	Personnel Authorizations Analysis System
PBG	Program and Budget Guidance
P/BS	Program/Budget Subsystem
PDM	Program Decision Memorandum
PEM	Phased Equipment Modernization
PERDIMS	Personnel Deployment and Distribution Management System
PERSACS	Personnel Structure and Composition System
POM	Program Objective Memorandum
POMCUS	Prepositioning of Materiel Configured to Unit Sets
PROFA(FORFA)	Master Force
QQPRI	Qualitative and Quantitative Personnel Requirements Information
Qty	Quantity
RCOMD	Resource Command
RDAISA	US Army Research, Development, Acquisition Information Systems Agency
RDP	Required Deployment Data
REQUAL	Requisition Validation
ROBCO	Readiness Objective Code
SACS	Structure and Composition System
SAMPAM	System for Automation of Materiel Plans for Army Materiel
SB	Supply Bulletin (700-20)
SHN	Shorthand Note
SIGMA	SACS Information Gathering and Management Analysis System
SRC	Standard Requirements Code
SSN	Standard Study Number

TAA	Total Army Analysis
TAADS	The Army Authorization Documents System
TAEDP	Total Army Equipment Distribution Program
TDA	Tables of Distribution and Allowances
TC	Type Classification
TL	Troop List
TLR/S	Total Logistic Readiness/Sustainability
TOE	Table of Organization and Equipment
TRADOC	U.S. Army Training and Doctrine Command
UIC	Unit Identification Code
UIS	Unit Identification System
USAMSSA	US Army Management Systems Support Agency
VFAS	Vertical, Force Accounting System
VTAAADS	Vertical, The Army Authorization Documents System

SECTION 1

INTRODUCTION

1.1 BACKGROUND

This report covers Task C, "Analyze the Accuracy and Timeliness of Available Data Used in the Current LOGSACS and PERSACS," of an ODCSOPS project entitled "Analysis to Determine Functional and Systems Requirements for an On-Line Structure and Composition System (SACS)," Contract Number MDA 903-78-C-0445, 26 September 1978. Task C required that the data flow in current LOGSACS and PERSACS products be analyzed to determine if they met the timeliness and accuracy requirements necessary to support materiel acquisitions and distributions; and personnel recruiting, training, reclassification, promotion, and distribution functions of the system. The task objectives were to:

- Determine timeliness of data flow
- Determine data inaccuracies, inconsistencies, incompatibilities, and inadequacies

1.2 RESEARCH METHODOLOGY

Research methodology utilized during this task consisted of:

- Interviewing functional and systems personnel
- Visiting:
 - US Army Research, Development, and Acquisition Information Systems Agency (RDAISA) at Radford, Virginia
 - US Army Depot Systems Command (DESCOM) at Chambersburg, Pennsylvania
 - US Army Logistics Evaluation Agency (LEA) at New Cumberland, Pennsylvania
 - US Army Military Personnel Center (MILPERCEN) at Alexandria, Virginia

- Evaluating documentation gathered during the performance of Task B¹
- Defining and analyzing the data flow from origin of SACS data to SACS customers' use of such data
- Evaluating and analyzing the LOGSACS and PERSACS data relative to the system objectives as documented in Section 2, this report
- Examining interactions between associated systems and SACS processing
- Evaluating the validation and correction feedback mechanism used by SACS

1.3 SCOPE

The scope of this task encompassed the LOGSACS and PERSACS products; their use by the three principal Army Staff agencies--the Deputy Chief of Staff for Personnel (DCSPER), the Deputy Chief of Staff for Research, Development, and Acquisition (DCSRDA), and the Deputy Chief of Staff for Logistics (DCSLOG); and users' perceptions of SACS data and problems encountered in applying SACS data in the various functional systems and processes. Analyses were made in the context of future as well as current SACS requirements and, coupled with materials and insights developed during Task B,¹ will serve to support subsequent tasks leading to the development of an improved SACS.

¹Analysis to Determine Functional and Systems Requirements for an On-Line Structure and Composition System (SACS), Report of Task B, Systems and Procedures Documentation, General Research Corporation, Report Number 1070-01-79-CR, 15 January 1979.

SECTION 2

SYSTEM OBJECTIVES

2.1 SACS PURPOSE

The purpose of SACS as documented in Chief of Staff Regulation (CSR) 18-11, Force Development Management Information System, 18 February 1976, is "to provide a capability of computing force structure equipment and/or personnel requirements and authorizations for a real or hypothetical force, for the current year and each of a series of future years." CSR 18-11 goes on to say that "The Force Development Management Information System (FDMIS), part of the Army Management Information System (AMIS), comprises ODCSOPS subsystems containing force and authorization data which can be selectively manipulated and displayed to facilitate management decisions. The major subsystems of the FDMIS are: Force Accounting System (FAS), The Army Authorization Documents System (TAADS),¹ Table of Organization and Equipment (TOE) Computational System, Structure and Composition System (SACS), and Basis of Issue Plan (BOIP) System." Paragraph 5b of the CSR further states that "Other Army Staff Agencies will: ... (3) use FDMIS data as the single source of force structure data in support of resource management requirements." Accordingly, ODCSOPS has the fundamental responsibilities for providing the Army Staff (ARSTAF) and field activities with timely and accurate requirements and authorizations data for both personnel and equipment resource management and decision making.

2.2 SACS OBJECTIVES

The objectives stated herein represent the understanding of Army personnel interviewed by the GRC project team. These undocumented objectives have evolved over time and have become the implied current objectives. These should be recognized as a significant expansion of the original

¹ At HQDA, TAADS data are being handled by the Authorizations Subsystem (AS) of the Force Development Integrated Management System (FORDIMS) and FAS will soon be replaced by the Force Structure Subsystem (FSS) of FORDIMS.

CSR 18-11 statement of purpose. The evolved objectives which are not specifically stated in Army directives are to:

- Provide *timely and accurate current-year* resource requirements and authorizations data by unit identification code (UIC) to ARSTAF and field activities *to ensure that properly trained personnel and correctly authorized equipment are provided to units based upon scheduled force structure changes.*
- Provide *timely and accurate budget and program year* resource requirements and anticipated authorizations data by UIC to ARSTAF and field activities *to ensure that procurement, recruitment, training, distribution, and other actions involving personnel and equipment are properly budgeted by major commands (MACOM), program directors, and appropriation directors.*
- Provide *timely and accurate out-year* resource requirements and anticipated authorizations data by UIC to ARSTAF and field activities *to ensure that procurement, recruiting, training, distribution, and other actions are planned and programmed, and that authorizations of both personnel and equipment can be phased for allocation to units on an approved, coordinated schedule.*
- Provide timely and accurate current, budgeted, and programmed resource requirements, authorizations or anticipated authorizations data to the Office of the Secretary of Defense (OSD) for joint force planning and, through OSD, to the Congress, NATO, and other services.

2.2.1 SACS Timeliness Objectives

SACS timeliness objectives may be described as:

- a. Producing SACS products according to an approved schedule.¹

¹ Approved schedule as prescribed in Chief of Staff Memorandum 77-5-41, 26 August 1977, for implementing the Management of Change (MOC) study.

- Twenty work days for PERSACS
- Forty-five work days for LOGSACS

b. Producing SACS products in time to influence decision-making processes.

2.2.2 SACS Accuracy Objectives

SACS accuracy objectives are to provide:

a. Error-free data element values that singularly represent a condition or event and collectively represent compatibility between data elements and records at a specified "as of" date.

b. Complete unit, personnel, and equipment data for a specific "as of" date that are 100% accurate in representing the Master Force as selected by the SACS criteria.

2.2.3 Interdependency of Timeliness and Accuracy

A dependency relationship exists between timeliness and accuracy in that data at the time of system input should ideally remain valid 6 to 9 months later when that data is used. Therefore, a SACS objective is to produce data that is as accurate at the time it is used as it was at the time of input to the system.

SECTION 3

DATA FLOW AND ANALYSIS

3.1 SACS DATA FLOW

Figure 3.1 is a macro flow chart showing the flow of SACS data. SACS fills a central or integrating role among the ODCSOPS systems. It serves to synthesize available force structure data and provide a coherent statement of Army requirements and authorizations for functional users in DCSRDA, DCSLOG, DCSPER, and field activities. Through these ARSTAF agencies and their field activities and associated MIS, SACS data flow throughout the Defense establishment and touch most personnel and equipment-related functions and activities in some manner. SACS is clearly critical to the Army's Planning, Programming, and Budgeting processes and to the support of its combat mission.

3.2 DATA IDENTIFICATION

The data identified for analysis was the data processed by five systems supporting SACS (FAS, TAADS, TOE, BOIP and SHN) and presented in the resultant LOGSACS and PERSACS products. The total macro flow of data was examined from initial guidance formulation to the distribution of personnel and equipment. Controlling data within this flow is derived from the FAS and TAADS.

3.3 INPUT DATA AUTOMATION

Input to the SACS process is completely automated; however, the degree of automation (i.e., extent of manual intervention) required to develop each input and the effectiveness of these automated processes vary considerably. The lack of effective automation for some processes contributes to timeliness and accuracy problems. The specific automated processes that are prime candidates for upgrading are the BOIP and SHN. These processes currently require approximately 2 to 3 weeks to complete because of their manual and batch processing requirements. Contributing to these problems are non-currency of supporting data bases and the considerable amount of processing time required to produce SACS products.

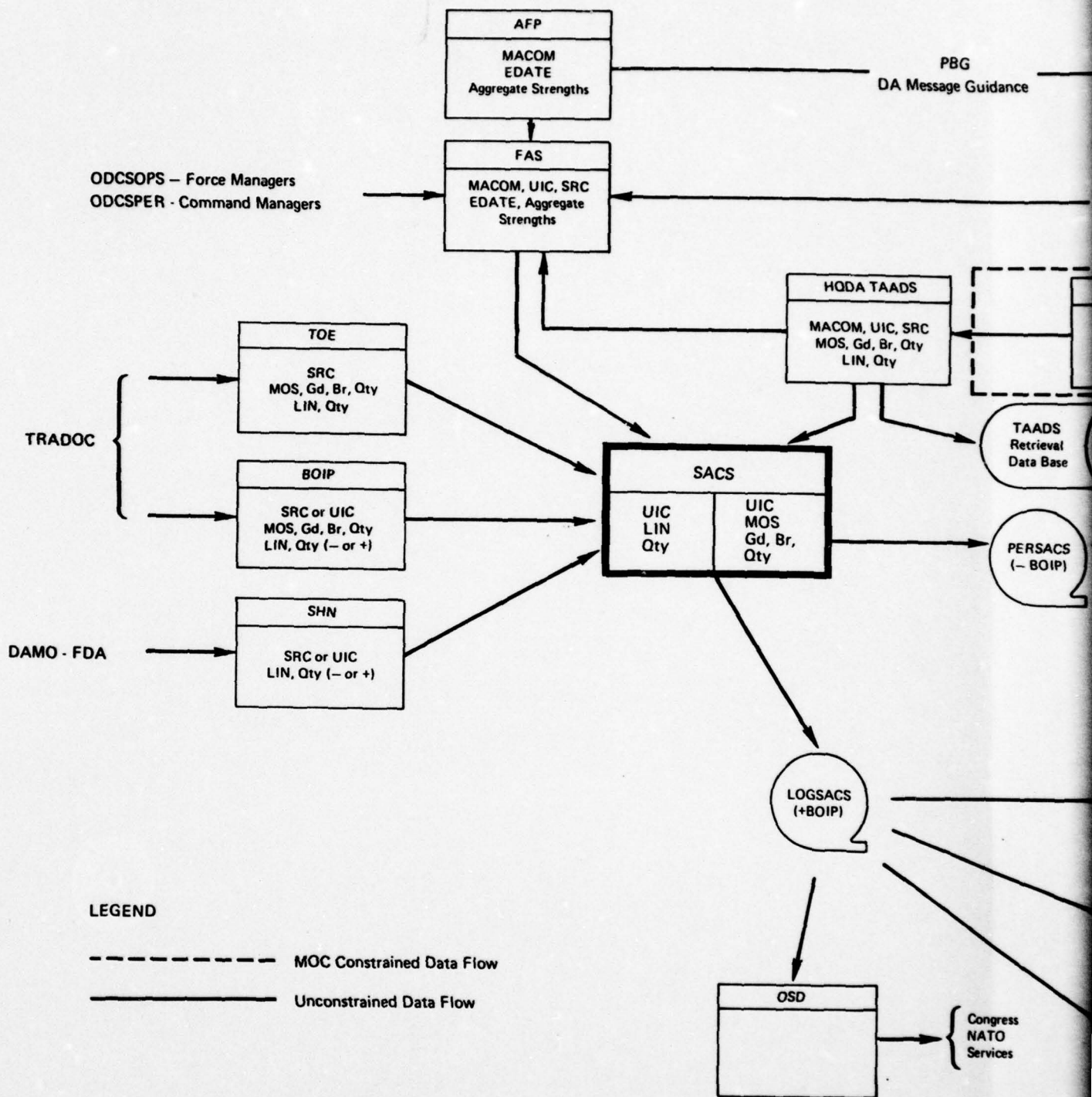


Figure 3.1 Macro Flow Chart - SACS Data Flow

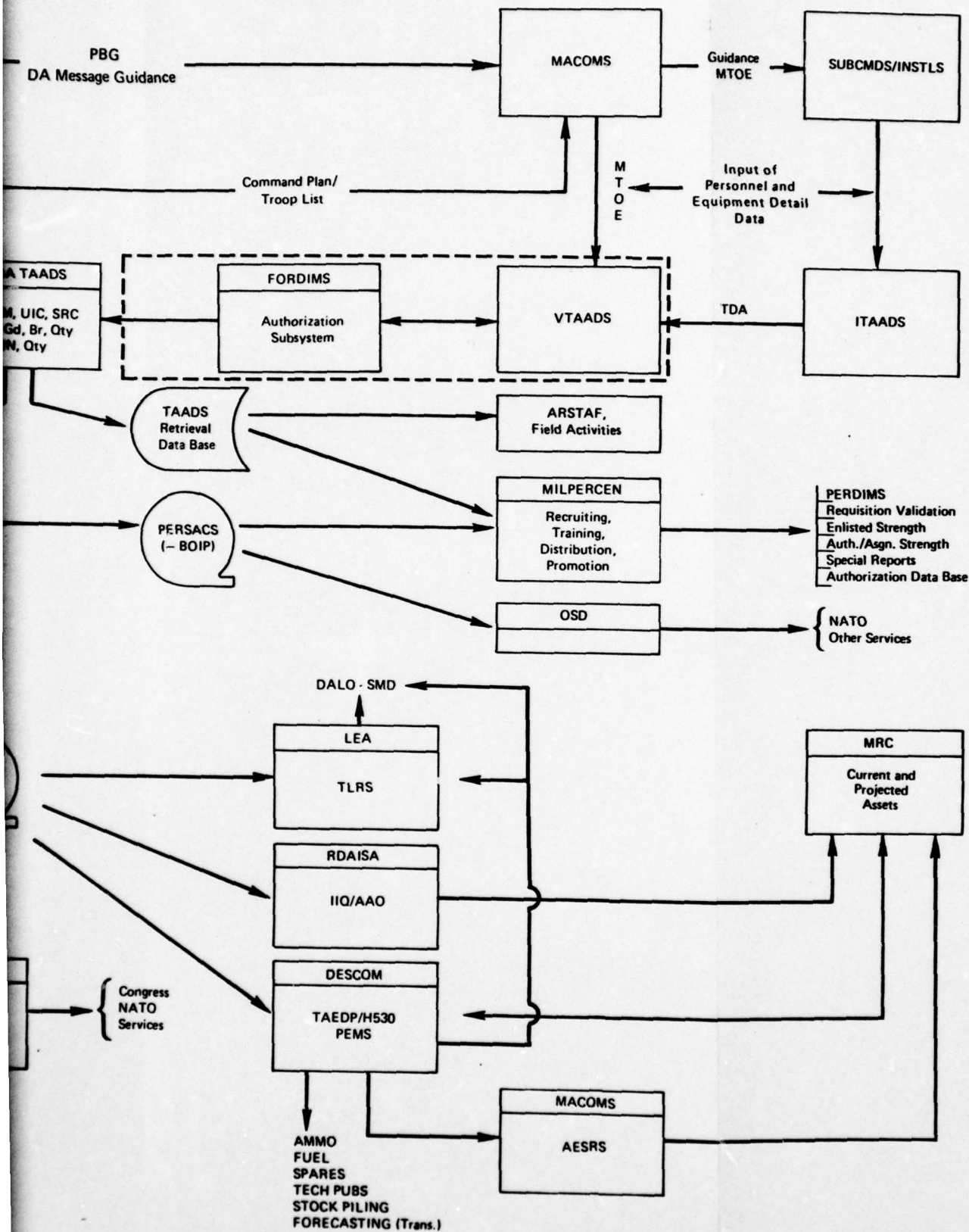


Chart - SACS Data Flow

Discrepancies between FAS and TAADS as identified in the SIGMA process currently require an inordinate amount of time to correct.¹ For internal SACS processing, the most time-consuming processes are:

	<u>PERSACS</u> <u>(20 days)</u>	<u>LOGSACS</u> <u>(45 days)</u>
SIGMA	10 days	6 days
Batch Type Software	4 days	8 days
BOIP Batch Type Software	} - - - - -	14 days
SHN Batch Type Software		
Manual Review Requirements	6 days	17 days

The state of the current automation of SACS and its associated data feeder systems contributes to many data inaccuracies. Specific examples are:

- Omission of units from both LOGSACS and PERSACS.
- Absence of split unit identification in PERSACS and LOGSACS and the lack of specific identification in TAADS.
- Lack of data element value and syntax edits in current SACS feeder systems and in SACS.
- Untimely or lack of submission of TAADS data to HQDA.
- Blank and inaccurate data in PERSACS and LOGSACS.

These inaccuracies occur, in part, because the feeder systems were not designed to fulfill SACS needs for providing resource requirements and authorizations data throughout the Defense establishment. Also, because of increased emphasis on the management of scarce Army resources in recent years, increased use of and emphasis on SACS data have been necessary. This, in turn, has lead to the identification of timeliness and accuracy problems which existed since the implementation of SACS but

¹The current USAMSSA/ODCSOPS FORDIMS may cause this situation to improve since file control will be under a data base management system (TOTAL).

were previously of little consequence since the data were not used as extensively.¹ SACS data are currently used in most aspects of personnel and logistics management and data inaccuracies are being found with each new application of SACS data.

General data timeliness and accuracy problems (real or perceived) can be related to one or more of the following areas:

- Evolutionary transition to more pervasive use of LOGSACS and PERSACS data
- Insufficient data edits
- Lack of data audits
- Faulty feedback and corrective mechanisms
- Absence of BOIP and SHN in PERSACS
- Inadequate data management
- Undefined source of requirements and authorizations data

Each of these areas will be discussed in detail in material which follows.

3.4 TIMELINESS

SACS outputs generally are produced according to schedules prescribed by the ARSTAF, although there have been instances where input or processing delays and/or rerun requirements have caused both the LOGSACS and PERSACS to be delivered well after the scheduled due dates. More importantly, the principal recipients and users of the SACS data including MILPERCEN, DESCOM, and RDAISA, have indicated that data contained in SACS products are frequently outdated even though the SACS products were delivered on schedule.

¹The implementation of the management of change (MOC) study has caused the TAADS data flow from MACOMS to HQDA to be reduced to two semi-annual 90-day periods each year.

3.4.1 Data Availability Relationships

Figure 3.2, Data Availability Relationships, graphically represents the timing of data availability time for SACS processing. The top line portrays a representative 19-month time span, including two MOC windows. The three horizontal boxes represent the data bases of the FAS, TAADS and TOE, respectively, with scheduled updates indicated. On the two levels beneath the quarterly production of PERSACS and LOGSACS products are shown. The bottom level depicts the recurring and ad hoc TAADS reports (shown as "TAADS Retrieval Data Base" also erroneously called the "Mini SACS"), some of which are produced on either the 10th, 20th, or 30th of each month of the year. The slanted and vertical lines represent the origin and "as of" date of FAS, TAADS, and TOE data when extracted for SACS purposes. For example:

- The SACS runs for quarters ending March and September use TAADS data that were held for as much as 90 days; FAS data that are updated daily; and TOE data that are updated monthly. SACS runs during these quarters produce products based on guidance that is as much as 157 days old in terms of data contents.
- The SACS runs for quarters ending June and December use TAADS data that were held as much as 180 days; FAS data that are updated daily; and TOE data that are updated monthly. SACS runs produce products based on guidance that is as much as 247 days old in terms of data contents.

The SACS data from the end of March and September are more timely and hence more accurate than the SACS data from the end of June and December. This difference shows clearly in TAADS data comparisons made in conjunction with personnel and equipment requisition validation processes.

As a further illustration, reports produced as of the 30 of January, as derived from the TAADS Retrieval Data Base, receive data from the FAS Data Base which was updated the same day. These data are less than 24 hours "old." The SACS reports as the 30th of January also derive data from the TAADS data base; however, the last time that data were completely

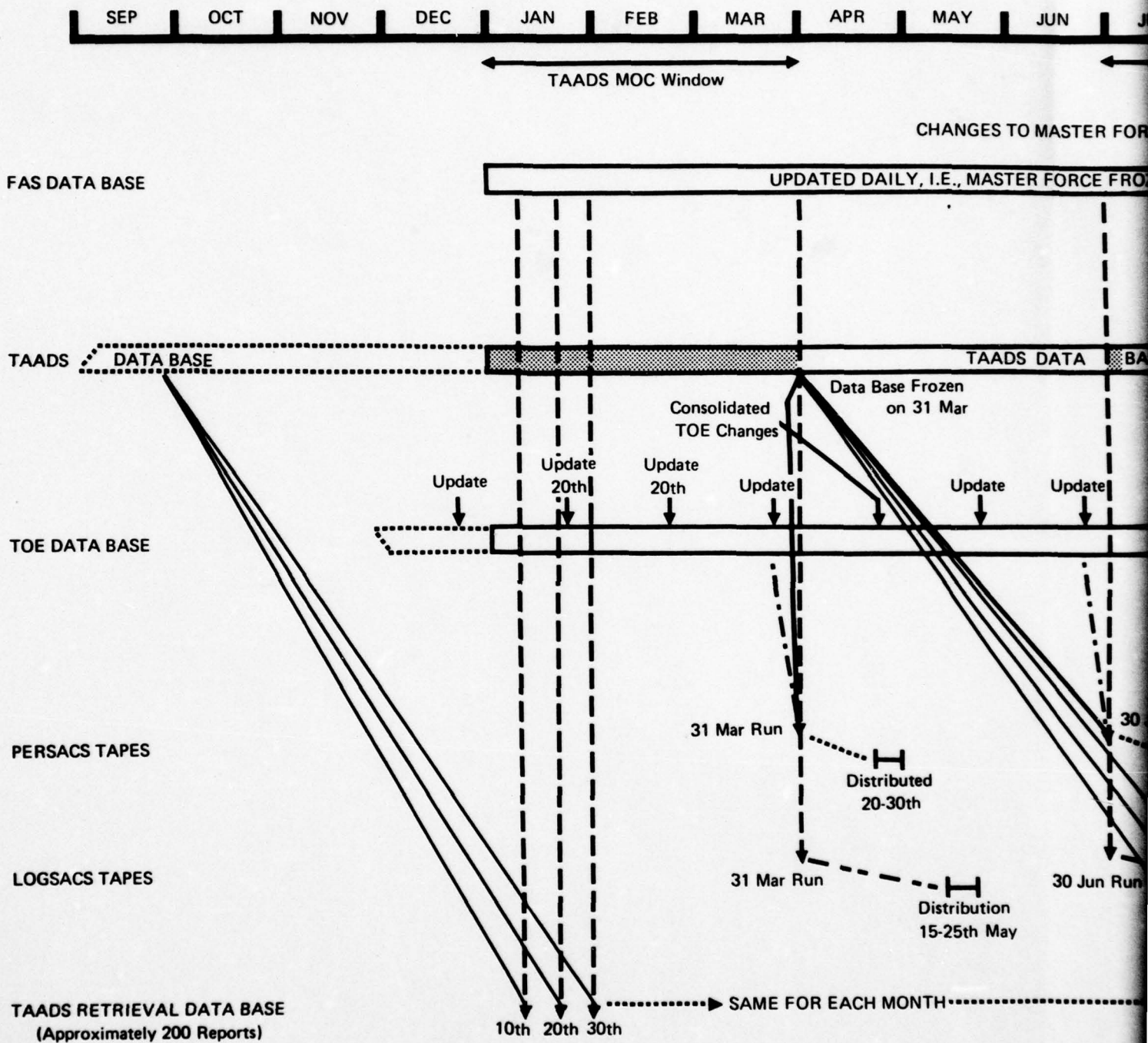


Figure 3.2 Data Availability

updated was on the 30th of September of the previous year, or 4 months previously.

Timeliness of data is even more critical in a situation such as the following. On the 15th of February 1979, a supply distribution manager uses the 31 December LOGSACS to validate a current requisition for a major item of equipment. The validation decision in some instances cannot be made at the MRC and referral to EARA is necessary. Changes to TAADS authorizations provided to the unit by MACOM may still not reflect in SACS as much as 9 months later.

3.4.2 SACS Data Flow Network

Figure 3.3, SACS Data Flow Network, shows the systems that provide data to SACS. Page 1 depicts the interdependent activities which are required to introduce new data and update or change existing data in each of the five supporting SACS systems (TAADS-event 11, FAS-event 13, TOE-event 19, BOIP-event 26, and SHN-event 20). The heavy activity lines and heavy event circles depict the direct SACS flow of data.

Page 2 of Figure 3.3, depicts the distribution of PERSACS and LOGSACS data tapes and the general flow of resource requirements and authorizations data to the personnel and logistical functions of the Army. This also indicates the important and critical position of SACS in administering these two functions and how the SACS data are intertwined in the sub-functions of personnel and logistics management. This illustrates the pervasive nature of SACS data, since SACS is an important aid in formulating and changing the Army's annual Five Year Defense Program (FYDP) and budget, as well as in executing the approved program and budget in the current year (the actual distribution of approved resources).

Figure 3.3 relates to Figure 3.1. Figure 3.1 identifies resource requirements and authorizations data flow between organizations or systems, or both, from generation of initial guidance through the various systems to PERSACS and LOGSACS, and on to the actual recipients of these SACS products. Figure 3.3, on the other hand, identifies the general activity

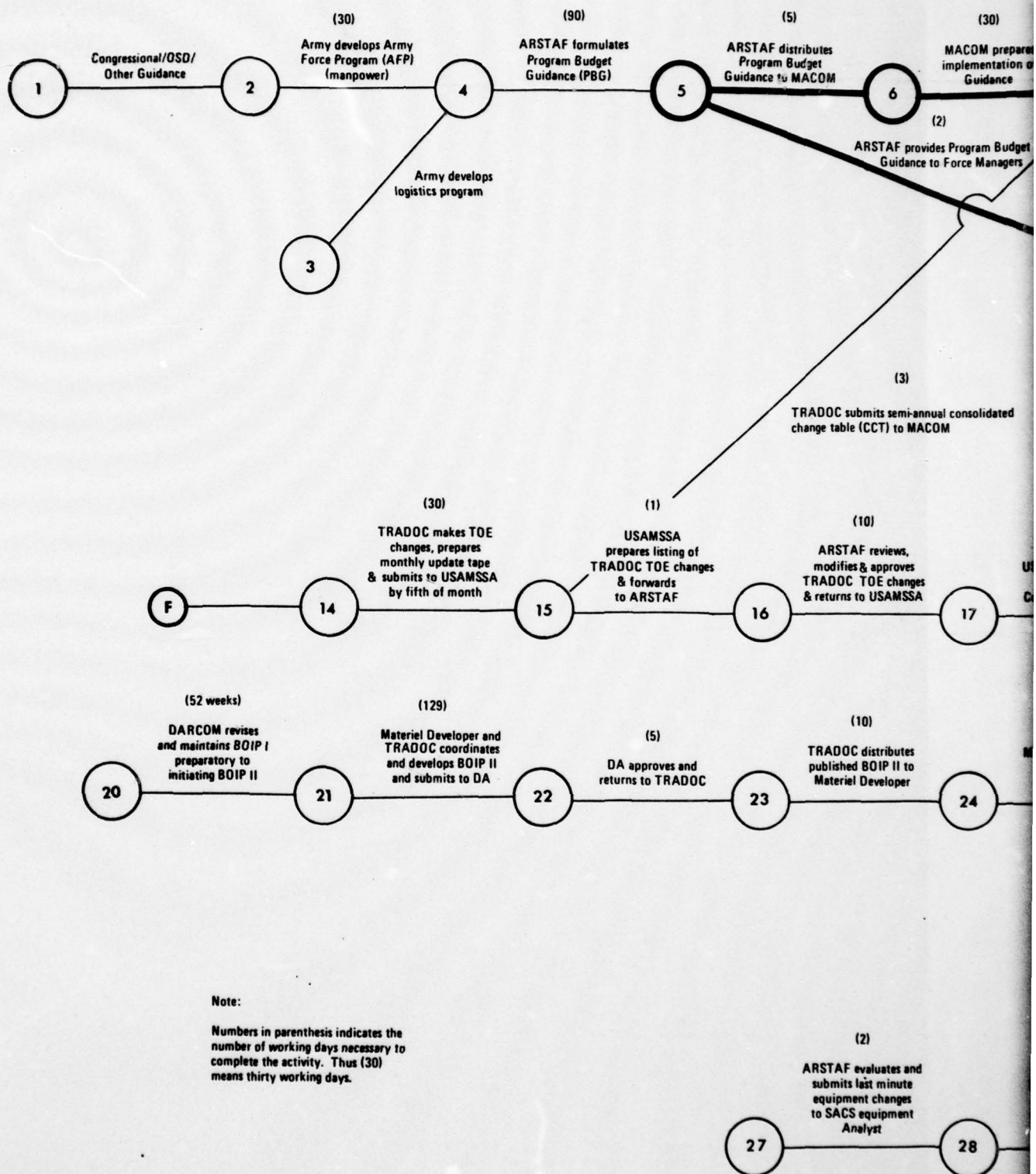
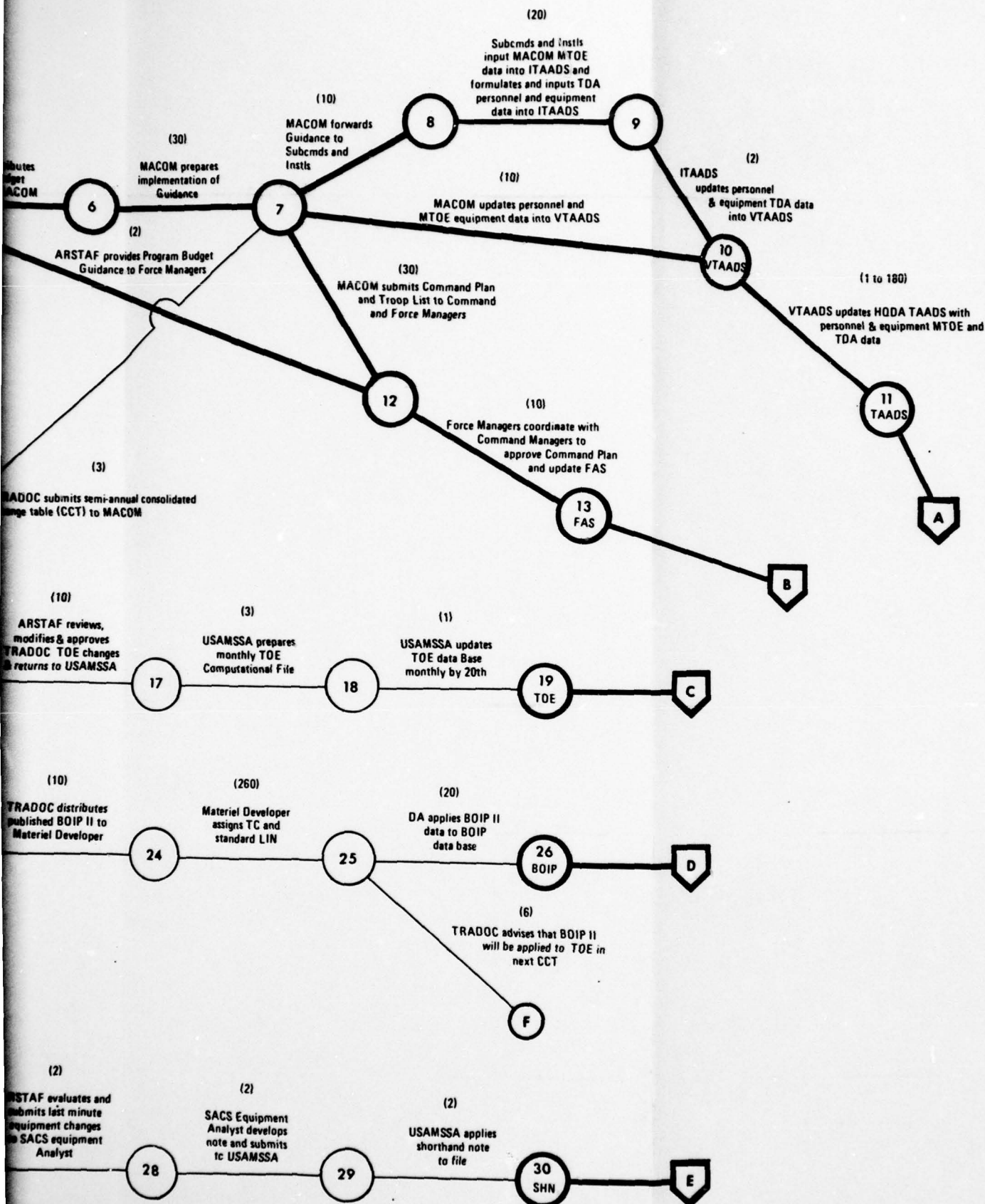


Figure 3.3 SACS Data Flow Network



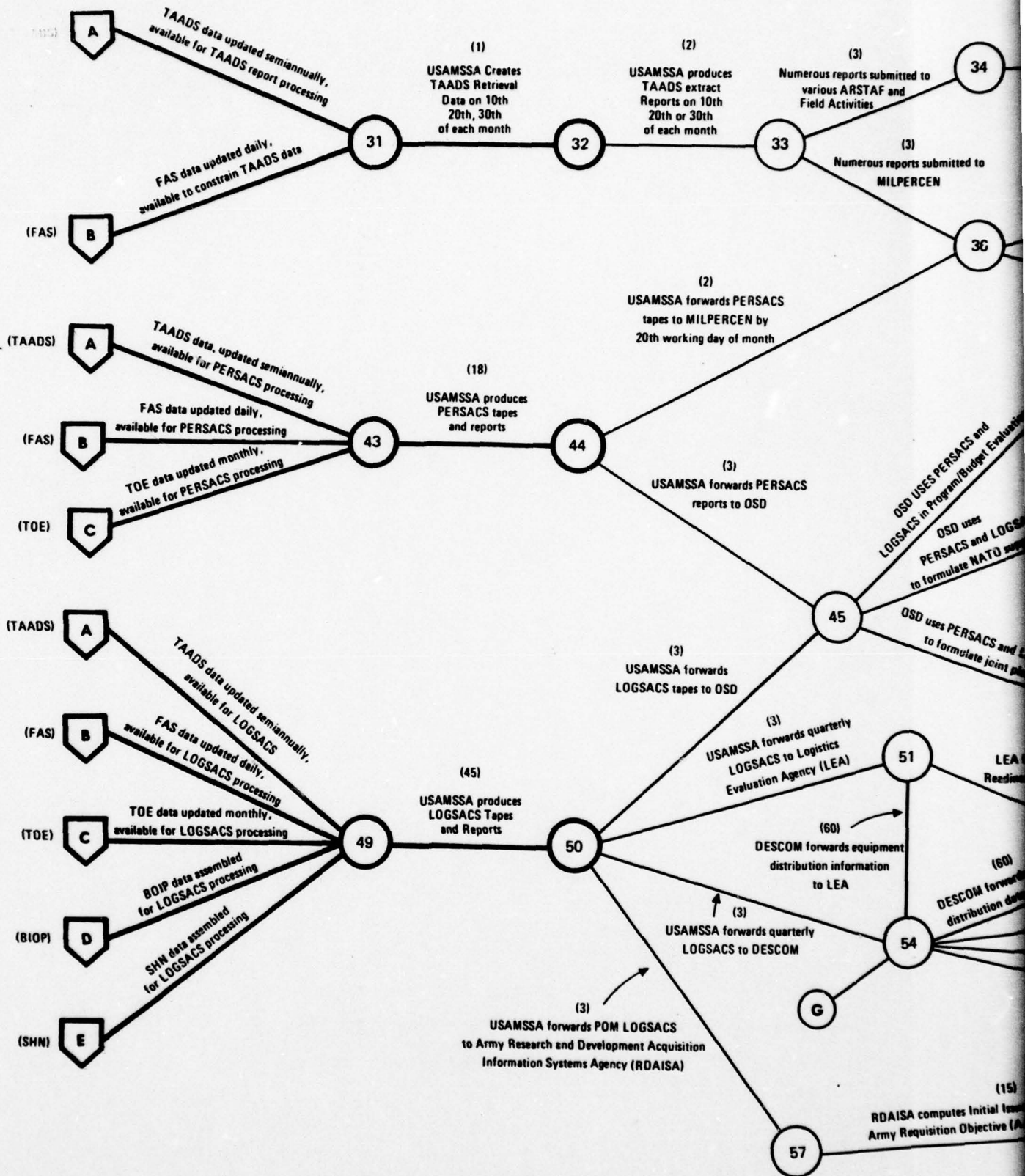
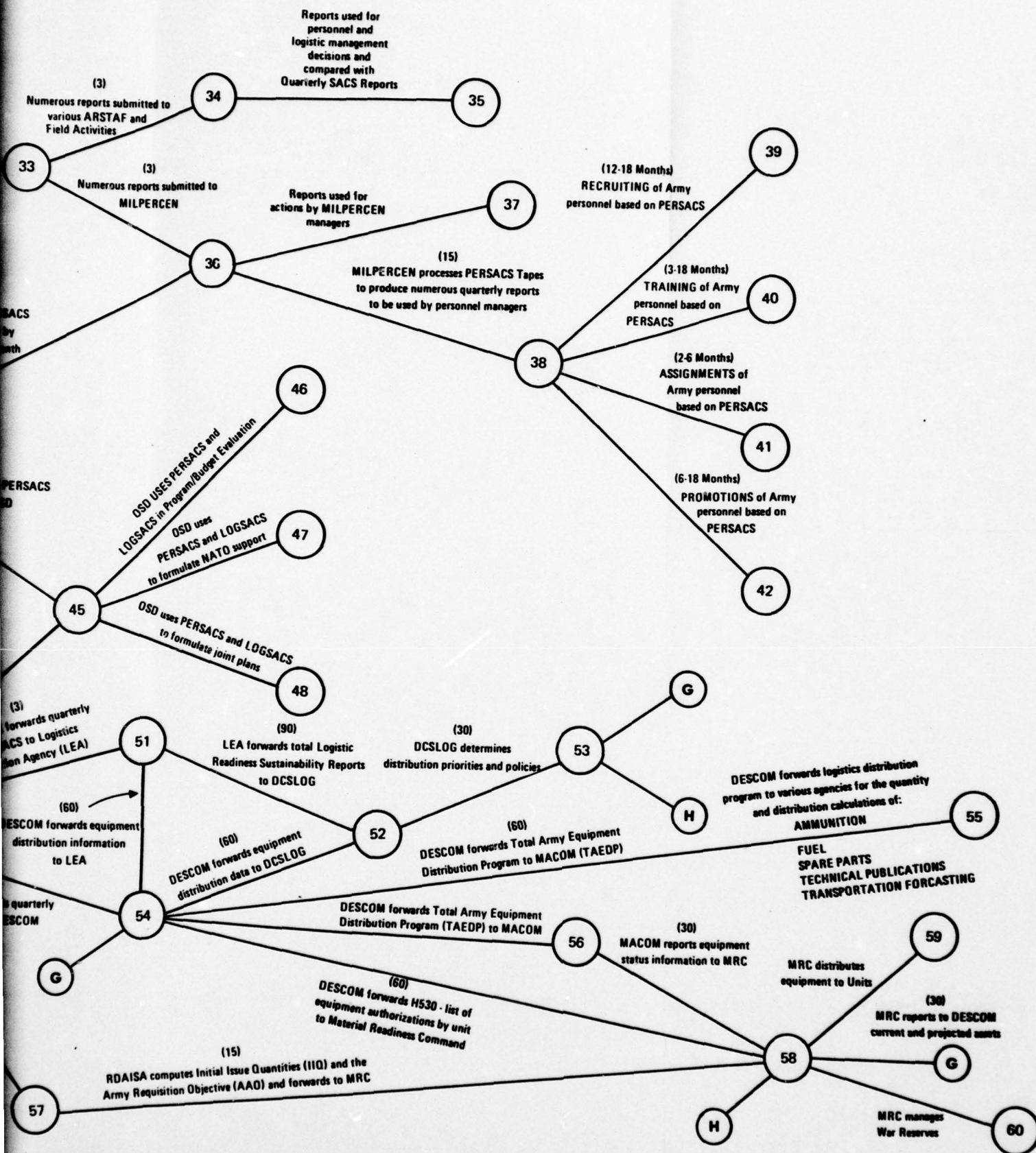


Figure 3.3 SACS Data Flow Net



3.3 SACS Data Flow Network (con't)

that takes place between events and the approximate number of days required to complete the general activity.

3.4.3 PERSACS Timeliness

The schedule for producing PERSACS is not a major problem. However, as previously illustrated, PERSACS data are untimely for the validation of personnel requisitions in the current MILPERCEN requisition validation (REQVAL) process, and especially in the Personnel Deployment and Distribution Management System (PERDDIMS). PERDDIMS is being designed to replace field-submitted requisitions with top-of-the system (MILPERCEN) generated requisitions. PERDDIMS field tests evaluated PERSACS data and concluded that, "...present PERSACS precludes the distribution of soldiers in a timely and accurate manner..."¹ This conclusion was based on comparison of PERSACS data to the unit authorization documents used for developing personnel requisitions.² Installations and/or MACOMS involved and results were as follows:

- Ten Fort Belvoir units representing TRADOC, FORSCOM, Corps of Engineers, DARCOM, Health Services, Army Communications Command, and a Joint Activity were tested with compatibility results ranging from 40% to 100%. Three units had 100% compatibility, two units 92% compatibility, and the remaining five units had compatibility scores of 87%, 82%, 77%, 68%, and 40%.
- Twenty-two units of the U.S. Army Communications Command (ACC) were tested with results ranging from 37.7% to 100%. These 22 ACC units were located in CONUS and overseas; at FORSCOM, Health Services, and DARCOM installations and in

¹PERDDIMS Task Force, Memorandum for the Record, 13 February 1979, Subject: "Results of the PERDDIMS Functional Field Test (FFT)--Information Memorandum."

²The PERSACS data used for this test was the quarter-end September 1978 PERSACS, a product of the MOC open window. This condition should present the most timely data since the quarter-end December 1978 PERSACS utilizes identical TAADS data which is then 90 days older.

Germany, Italy, and Turkey. Six of these ACC units involved "split" segments at different geographical locations.

- October 1978 compatibility ranged from 70% to 100%
- April 1979 compatibility ranged from 37.7% to 100%

The primary cause for the lower compatibility was the requisitioner's use of newer authorizations than those reflected in PERSACS.

- Ten Fort Riley units representing FORSCOM, TRADOC, Health Services, and Army Communications Command were tested with compatibility results ranging from 84.1% to 99.4%. Three units had less than 90% compatibility with one TRADOC split unit (WIJEAA) having personnel stationed at 63 different geographical locations spread over 12 mid-western states. One FORSCOM unit (WDZNAA) had a company located at Fort Polk—another split unit. In both instances, PERDDIMS would assign replacement personnel to the parent unit location rather than the true location that had the requirement and authorization.
- Twenty-three USAREUR units, located in Germany, Berlin, Italy, and Turkey, were tested with compatibility ranging from 75.4% to 100%. Compatibility statistics for December 1978 were 18 units—100%; 5 units ranged from 97.1% to 98.6%. The same units' compatibility statistics for September 1979 were: 13 units—100%; 10 units—ranged from 75.4% to 98.6%. A principal cause for compatibility was the use of newer authorization documents by the requisitioner.

Some additional specific problems and unit identification, statistics and remarks are provided in Appendix I.

3.4.4 LOGSACS Timeliness

The LOGSACS production schedule is a timeliness issue, especially the first LOGSACS produced after the turn of each fiscal year, which is for the POM. It is important that this LOGSACS contain the latest data available; hence, it must contain the TAADS data input to HQDA during the July-September MOC window. The October 1978 LOGSACS was not received

at RDAISA until 15 December. RDAISA has the responsibility for computing the IIQ/AAO for all items of equipment and providing them to the Material Readiness Command (MRC) by early January (Activity 57-58, Figure 3.3). The MRC must complete their actions and submit data through DARCOM to DCSRDA for the May-June POM submission (Activity 54-58, Figure 3.3). The current LOGSACS production schedule does not allow RDAISA sufficient time for reviewing, analyzing, and correcting LOGSACS data prior to their use in the important computations of IIQ/AAO. Therefore, any delays in providing LOGSACS or requirements to research and correct its data, cause all personnel involved in preparing the procurement program to feel the time squeeze.

Each quarterly LOGSACS is important to DESCOM since it is the basis for preparing the Total Army Equipment Distribution Program (TAEDP) (Activity 54-55 and 54-56, Figure 3.3) and the Phased Equipment Modernization (PEM) System as well as the H-530 report. The H-530 report is forwarded to each MRC (Activity 54-58, Figure 3.3): it reflects equipment authorizations by UIC and it is the document used for validating unit equipment requisitions. In each instance when MRC cannot validate a requisition telephonically, the U.S. Army Equipment Authorizations Review Agency (EARA) is requested to aid in resolving its validity. Statistics for a 6-months period are:

	<u>Invalid UIC</u>	<u>Invalid LIN</u>	<u>H-530 Not current</u>
Sep '78	27	164	186
Oct '78	29	179	177
Nov '78	19	168	170
Dec '78	15	128	137
Jan '79	31	207	302
Feb '79	29	144	213

Some invalid UIC and LIN problems are traceable to LOGSACS. However, the majority of the "H-530 not current" problem requisitions are traceable to instances where units have newer documents in their possession than were available in LOGSACS to prepare the H-530 report.

3.4.5 SACS Production Schedule Components

The SACS production schedule components that consume time are identified in paragraph 3.3 above. Each SACS component consumes time related to a condition as follows:

<u>SACS Component</u>	<u>Condition</u>
SIGMA	This SACS preprocessor is utilized to match FAS and TAADS data and correct obvious error conditions. This is essential because no continuous interface processing exists between FAS and TAADS. Frequently, multiple SIGMA runs are essential to correct data in the FAS prior to each basic SACS run to ensure a maximum match of TAADS and FAS records. SIGMA processing can require at least one week and frequently more to correct the errors identified when matching FAS and TAADS.
Batch Processing	The entire SACS processing is sequential batch via magnetic tape. The software system is second generation processing although run on fourth generation computer hardware. This type processing requires an inordinate amount of clock computer time in comparison to actual central processing unit (CPU) time because of sequential tape handling. Through each program of the system, tape handling is required to include mounting and dismounting on tape drives. The library handling and cataloging functions of the magnetic tapes also require much time. Errors are easily introduced through manual tape processing and handling. The BOIP and SHN applications are also sequential batch processing. The computer processing consumes appropriately 4 days for PERSACS and approximately 8 days for LOGSACS. The principal difference is the application of BOIP and SHN in LOGSACS.
Manual Review	The manual review process is almost exclusively devoted to checking, verifying, and auditing initial, intermediate or final output reports before the SACS products are released to SACS data users. This manual effort is accomplished in DCSOPS (DAMO-FDA). The effort consumes up to 1 week for PERSACS and between 2 and 3 weeks for LOGSACS. This review process is assisted by automated programs, the Personnel Authorizations Analysis System (PAAS) for PERSACS and Basis of Issue Monitoring and Recording System (BOIMARS) for LOGSACS. These programs do not perform complete audits of data contents.

3.5 DATA ACCURACY

SACS products generally involve considerable inaccurate or missing data in each run. As a result, user confidence in SACS output is such that they frequently question perfectly valid information. There are many reasons for inaccurate data in SACS ranging from errors committed at time of input into a feeder system to SACS processing. Significant reasons for SACS data inaccuracies have been previously categorized under general areas identified in paragraph 3.3, and are explained further in the following paragraphs and in the appendixes.

3.5.1 The Nature of LOGSACS and PERSACS Data

SACS has evolved over the past decade from a system that was intended to provide requirements and authorizations data for validating requisitions to a system that attempts to provide much broader information. These data are now used for various functional requirements such as: recruiting objectives; training requirements; promotion objectives; and equipment distribution, initial issue quantity, Army acquisition objectives, and phased equipment modernization actions.

SACS data are currently used so extensively throughout the Army, that SACS is becoming the Army's *most important* management information system. In Appendix B, the evolutionary transition to more pervasive use of LOGSACS and PERSACS is discussed.

3.5.2 Data Edits

A very important aspect of systems development is specifying adequate edits of individual and related data values. SACS as a system maintains no data base. Therefore, when SACS obtains data from FAS, TAADS, TOE, BOIP, and SHN, it must be complete, timely, accurate, and interface effectively. Otherwise SACS products contain inaccurate data. Either inadequate or no edits exist in the aforementioned systems. Therefore, inaccurate data or blank data element fields are passed to SACS and on to users of LOGSACS and PERSACS. (For example, RDAISA, DESCOM, and MILPERCAN have cited specific invalid or blank data fields.) In Appendix C, data edits are discussed and general examples are cited. In Appendix I specific examples are identified.

3.5.3 Data Audits

Current SACS processing utilizes no technique of quality assurance to confirm the presence of all FAS units that meet the SACS force selection criteria in the LOGSACS and PERSACS. Also, there is no current method employed to assure that all units have equipment and personnel detail data, as appropriate. It is recognized that an effective data audit for all data elements in SACS would be impractical; however, accounting for all records and assuring their completeness is a feasible alternative. SACS products are frequently incomplete when released to users and ODCSOPS is advised of omissions only when users begin to process the LOGSACS or PERSACS. In the October 1978 and January 1979 SACS runs, data problems were reported by users that data audits could have detected. In Appendix D is a more detailed discussion of data audits; in Appendix I are examples of specific data omissions that a data audit technique could have detected and for which corrective action could have been taken prior to dispatching the PERSACS and LOGSACS products.

3.5.4 Feedback and Correction Mechanism

SACS has no satisfactory automated and directly interfaced mechanism to correct data or to feed data problems to other systems so that they may be corrected. The SACS Branch currently corrects data problems by rerunning SACS or obtaining correct data and relaying it by telephone to appropriate agencies. SHN are the only data under exclusive DAMO-FDA control. All other data used in SACS are controlled by other ARSTAF or field activities. In some cases one data element is "controlled" by more than one office. Frequently, what appears to be a simple error in SACS data becomes a major problem to correct. A data element that currently is in this category is the identity code (female, male, or either). When TAADS detail data are not available, SACS must use TOE detail as the source for personnel data. The identity code is not maintained in TOE and the PERSACS products do not include this important code when TOE details are included in PERSACS products. Other data elements equally difficult to correct are: ADCON; DAMPL/DAPPL; Category; POMCUS ID; and others. In Appendix E is a further discussion of feedback/corrective mechanism.

3.5.5 BOIP and SHN in PERSACS

The PERSACS output does not reflect changes in personnel requirements based on equipment modernization programs because BOIP data are not applied to PERSACS output. SHN could be used to refine or to add personnel data by SRC or UIC. In some cases, the current practice is to drop a unit from PERSACS because the unit personnel detail data are missing. By using SHN, this practice would not be necessary and PERSACS data would improve.

The BOIP is currently being used in MILPERCEN, via manual methods to modify SACS data to determine recruiting and training requirements. This approach is labor intensive, subject to error, and never computes the total BOIP impact. The BOIP and SHN must be built into PERSACS processes in a manner similar to that used by LOGSACS. The absence of BOIP and SHN in PERSACS is discussed in Appendix F.

3.5.6 Data Management

Data management, to be effective, must consist of control over all aspects of systems development and information flow from systems. The control must be exercised by senior personnel to ensure broad oversight over all systems in a functional area. For example, within ODCSOPS, no system should be changed without first advising the particular ODCSOPS proponents of each participating system of the impending change. Data management must consider the flow of information from point of data capture through all systems, including interface systems, to the ultimate data users. When more than one system feeds data to a synthesizing system like SACS, data management should be under the control of an agency with day-to-day operational responsibility for system changes as well as system operation. For example, when the equipment requirement code (ERC) was implemented in TAADS, simultaneous action was not taken for TOE implementation so that it could be provided to SACS from either TAADS or TOE. Currently, when MTOE details are not available in TAADS, SACS obtains the required detail from TOE where the ERC has not been implemented.

Data management within DAMO-FD is fragmented among three divisions. The maintenance of the M Force is split into the current year and budget year, with responsibility assigned to DAMO-FDP, and the program out years, with responsibility assigned to DAMO-FDF. To further complicate this, the input responsibility for updating the M Force for all years is assigned to DAMO-FDA. The force structure data management takes on a more complicated aspect since the TAADS responsibility resides with DAMO-FDU, when in fact, DAMO-FDU has an automation responsibility with no direct responsibility for the personnel and equipment data. TAADS functional responsibilities accrue to DCSPER and EARA as follows:

- The personnel section of TAADS documents (Section II) is a direct DCSPER responsibility. The guidance for the details of Section II is issued by MILPERCEN in AR 611-101 and AR 611-201. Since this guidance must be implemented in Section II of TAADS documents it seems only logical that MILPERCEN rather than DCSPER should have Section II TAADS review responsibility.
- The equipment section of TAADS documents (Section III) is the responsibility of DCSLOG but delegated to EARA. EARA functions for DCSLOG to maintain unit equipment authorizations data and is able to confirm for DCSLOG unit authorizations at any point in time based on all Army actions taking place.

Appendix G and its inclosure contain additional information concerning data management. The inclosure points out that the "SACS Responsible Agency" is dependent upon the "Feeder/Coordinating Agency" for the quality of data input to SACS. Also, since SACS (DAMO-FDA) is an end-user of force structure data in preparing the PERSACS and LOGSACS, that office is the responsible agency for coordinating SACS problems. At the current time DAMO-FDA does not have a mechanism to influence what happens in DAMO-FDP, DAMO-FDF, DAMO-FDU, and DAPE-MBA.

3.5.7 Source of Requirements and Authorizations Data

CSR 18-11 states an Army policy that the source of requirements and authorizations information is the SACS. This information is provided in the form of PERSACS and LOGSACS. The SACS data are under increased scrutiny because of increased uses and importance attached to them. While this is true, it is also true that much reliance is still placed on TAADS data at the HQDA, MACOM, installations, units, and HQDA field activities. USAMSSA operates a TAADS retrieval data base and provides reports that are similar to SACS reports, but the TAADS data are incomplete when compared to SACS data, since only those TAADS documented units that match FAS on UIC and EDATE are included in this retrieval data base.

For requisition validation purposes, MILPERCEN frequently uses TAADS, VTAADS, or installations data provided by telephone. MILPERCEN also maintains SACS requirements and authorizations data which are frequently altered based on information obtained from various sources, other than SACS. AR 310-49 specifies that TAADS will be the source for authorizations information. In reality TAADS is only a partial source for authorizations. Since TAADS or TOE can be used in SACS and either TAACS or TOE strengths can be factored to match the strengths in the FAS, TAADS is not always more valid than SACS information. Appendix H is a further discussion of sources of requirements and authorizations data.

3.5.8 Specific Timeliness and Accuracy Problems

Appendix I documents 26 specific examples of timeliness or accuracy problems. Other specific problems are identified and discussed in the body of this report or its other appendixes. There are real and perceived problems in SACS data.

The Army personnel contacted with respect to identifying specific data timeliness and accuracy problems related to PERSACS and LOGSACS were employed in MILPERCEN, DESCOM, RDAISA, and EARA.

The MILPERCEN personnel seem to utilize the PERSACS data in their daily processes much more extensively than do the personnel at DESCOM, RDAISA, or EARA. The principal reason for this is that MILPERCEN is responsible for the total personnel asset picture from recruiting quotas, to training, redistribution, promotion, and reassignment and reclassification, whereas, the logistic functions of procurement, distribution, and redistribution are decentralized in six MRC and functional organizations. The MILPERCEN centralization concept causes the PERSACS data to be extensively processed and handled by many personnel within one organization. On the other hand, the decentralized concept under which the logisticians currently operate causes LOGSACS to be processed and handled by a few personnel at each aforementioned organization. From this viewpoint, the LOGSACS problems of timeliness and accuracy are significant and relatively easy to identify. The PERSACS problems of timeliness and accuracy are just as significant but not as easily identified because of the extensive internal MILPERCEN processing of the PERSACS data. In this respect, though MILPERCEN has real problems with PERSACS, as the entries on Appendix I indicate, some are internal MILPERCEN problems. One MILPERCEN officer said, "There is common agreement that problems exist in the PERSACS data base; but, there is not common agreement as to the loci of the problems nor the solutions. A majority of the problems are recognizable but inexplicable."¹

3.5.9 FORDIMS Contributions to SACS Improvements

FORDIMS will make minimal contributions to the improvement of data timeliness and accuracy in either the LOGSACS or PERSACS. A most significant improvement will be implementing the *guidance tracking procedure*. Since this procedure will aid in the exercise of greater control over authorizations by MACOM, it should, over time, reduce the number of units that have spaces factored.

¹DAPC-EPS-O Disposition Form, Subject: "Identification of PERSACS Problem Areas," 18 October 1978.

The data edits implemented in FORDIMS are data element value edits only. Relationship compatibility type edits discussed in the body of this report and Appendix C are not being implemented in either the Force Structure Subsystem (FSS) or the Authorizations Subsystem (AS).

Timeliness of force structure data flow to SACS and on through PERSACS and LOGSACS to users in MILPERCEN, RDAISA, and DESCOM will not vary since the data flow into each SACS feeder system remains unchanged under FORDIMS.

In Appendix J is a more detailed discussion of the impact of FORDIMS on SACS.

SECTION 4

CONCLUSIONS

This review of the accuracy and timeliness of SACS data establishes that SACS data is neither timely nor accurate for all the M Force units selected to be in SACS products. Specific conclusions are as follows:

1. There is a general lack of understanding of the pervasiveness and importance of SACS within the total operation of the Army. This lack of understanding erodes the quality of data and the cooperative management of all supporting systems.
2. LOGSACS and PERSACS data are not timely because the data extracted from SACS supporting data bases are not always current. Incompatible timing of supporting systems from which SACS selects data is partly related to the MOC window and the TAADS data flow is not conducive to producing timely SACS data.
3. There are a lack of data value edits and data compatibility edits within or between SACS supporting systems.
4. There are no complete audits in SACS to ensure that all units and records are included in LOGSACS and PERSACS products. Omissions of detail and, more important, omissions of units can occur and pass to the PERSACS and LOGSACS users undetected.
5. There are no feedback, corrective and/or interfacing mechanisms for resolving erroneous data conditions within and between supporting systems of SACS.
6. The absence of BOIP and SHN data in the PERSACS creates a fundamental disparity between data in the LOGSACS and PERSACS with respect to its completeness and mutually supportive nature.

7. The management of data quality both within the automated and the manual procedures is inadequate in that it allows unacceptable and unusable data to pervade SACS products.

8. Multiple sources of requirements and authorizations data contribute to a lack of confidence in SACS products and provide a "crutch" when either PERSACS or LOGSACS fails to support a current action. Because of this, the users of SACS data are not as aggressive as they otherwise might be in reporting problems of a specific nature regarding either PERSACS or LOGSACS data.

SECTION 5
RECOMMENDATIONS

The following recommendations of the SACS Project Team on the study of accuracy and timeliness of data are numbered to correspond to the conclusions in Section 4.

1. Implement a training program for appropriate personnel at all levels of ARSTAF, supporting organizational entities, USAMSSA, and users to assure awareness of the overall importance of SACS. An ongoing training program is required to assure that newly assigned persons are properly aware of the pervasiveness of SACS.

2. Align the update frequency of all SACS supporting systems to coincide with the MOC window within TAADS. Include criteria for frequency of EDATE changes.

3. Implement a policy that requires all input data be subjected to stringent edit criteria, i.e., value, compatibility, syntax, relationship, etc.

4. Implement an automated SACS data audit concept that will account for and control on all unit records extracted from FAS (FSS, FORDIMS) and all unit detail records extracted from TAADS (AS, FORDIMS) or TOE in order to ensure that SACS products properly represent the M Force as selected by SACS criteria.

5. Develop and implement automated and manual procedures for a SACS configuration control concept that would require formal reports of erroneous SACS data or processing for investigation, validation, and implementation of corrective action, as appropriate in the supporting system, either by way of updating data or a systems change request.

6. Incorporate BOIP and SHN data into the PERSACS.

7. Publish a SACS coordinated Data Management Plan (to include quality control procedures), an updated SACS Data Element Directory, a SACS systems Procedures Manual, and a SACS Functional Users Guide.

8. Establish, through further study, the most appropriate source of authorization and requirements data for each use currently being made of SACS outputs.

The above recommendations are provided for preliminary review by the Army at this time and will be considered during pursuit of subsequent study tasks leading to development of final recommendations for SACS improvements.

APPENDIX A

EVOLUTIONARY TRANSITION TO A MORE PERVASIVE USE OF
LOGSACS AND PERSACS

APPENDIX A

SUBJECT: Evolutionary Transition to a More Pervasive Use of LOGSACS and PERSACS

PROBLEM STATEMENT: There is a general lack of understanding or a misunderstanding of the current SACS role in the management and utilization of force structure, personnel, and equipment information.

EXPLANATION/CAUSATIVE FACTORS: Current SACS is used more comprehensively than it was 5 years ago. Today the ARSTAF and field activities are using SACS data to a much greater degree and are more aware of SACS data and its importance and shortfalls. Despite this, there is no universal understanding of *what SACS is to accomplish, what SACS is to provide, and what degree of importance SACS data have in relationship to TAADS, VTAADS or ITAADS data.* In addition, there is minimal understanding of the importance of SACS data within the organizational entities responsible for managing data which are critical to SACS. This condition impacts the quality of SACS data from many aspects. SACS data convey three fundamental types of information which make up either the LOGSACS or PERSACS products. These types of information are:

- Organizational data described by major commands, locations, specific unit identifications, and various codes for administrative purposes.
- Personnel data described by aggregate strengths by military identity (officer, warrant officer, and enlisted) and the details which identify grade, branch, military occupational specialty (MOS), and quantity related to each specific unit in the force by unit identification code (UIC).

- Equipment data described by specific type of equipment required to perform the specific mission of the parent unit by line item number (LIN) and quantity.

In an aggregate form, these three types of information identify complete MTOE and TDA organizations as documented in the DCSOPS force structure systems and are categorized as "requirements" and "authorizations" applicable to current, budget, and program years. Each unit has one or more effective date(s) (EDATE), which relates to unit actions such as activations, reorganizations, deactivations, etc. The EDATE is used for phasing units through the force and is subject to change based on the requirements of force or command managers, MACOMS (VFAS or VTAADS) or the equipment modernization program. The EDATE can be changed daily, weekly, or monthly and is essentially unconstrained. For example, no rules such as conditions and time-frames for changing EDATES have been found. Frequent EDATE changes are counterproductive to development of timely and accurate data, since they introduce turbulence that should not be permitted to influence the overall force structure system.¹

SACS was developed in the 1970 time frame as the ARSTAF system that would provide personnel and equipment authorizations data to the principal ARSTAF managers of personnel and equipment. The original SACS developers did not perceive that one day data from SACS would be as pervasive as it now is throughout the vast Army network utilized in planning, programming, and budgeting; in the personnel functions of recruiting, training, promotion and personnel distribution; and in the materiel functions of requirements computations, war reserve planning, equipment distribution and transportation planning, phased equipment modernization, and many other associated logistical functions.

¹EDATE may be prescribed for various changes such as: MOS, AMSCO, LIN, or other guidance. Force Managers and MACOMS in FAS, VFAS, and TAADS may change EDATES. EDATE changes are not always coordinated for future application (DF, DAPC-EPS-D, 18 October 1978, "Identification of PERSACS Problem Areas").

The LOGSACS utilizes Basis of Issue Plan (BOIP) data whereas PERSACS does not. The BOIP permits the application of equipment modernization data to LOGSACS whereas the Qualitative and Quantitative Personnel Requirements Information (QQPRI), which is included in the BOIP, and applicable to equipment modernization, is not applied to personnel MOS, grade, branch, and quantity data by SRC in PERSACS processing. The Army recognizes that BOIP data must be applied to PERSACS and once this is accomplished the PERSACS will provide phased authorizations. This will not be possible, however, without further system modification. The BOIP is oriented to standard requirements code (SRC) and each BOIP has an EDATE which identifies when the BOIP is to be applied to change unit *requirements*. Thus, all MTOE units organized under a particular SRC (may be one or many) have the BOIP applied with a common effective date, independent of projected phase-in of equipment. Therefore, the function of "phasing" the equipment and personnel into units is, in reality, the function of projecting authorizations which is controlled by "asset availability projections."

A general belief exists among ARSTAF personnel that the unit EDATE and the SRC EDATE are applicable to the phasing of both requirements and authorizations, when in fact these dates are primarily applicable to requirements. Only the dates applicable to authorizations are controlled by programming and budgeting constraints which determine asset availability. These realities also determines when units are to be provided equipment and personnel from "modernization programs."

The current SACS is accepted in some quarters as the authoritative source for requirements and authorizations data. However, there is still significant reliance on HQDA TAADS and VTAADS as the source for this data. In other instances, information provided by installation personnel is accepted as the source for requirements and authorizations. *Users of requirements and authorizations most frequently do not understand the implications of not utilizing SACS data.* SACS is always unit and strength constrained based on the most recently approved force structure and manning levels. No other requirements and authorizations data in general distribution is so constrained.

PERSACS data are used very extensively throughout MILPERCEN. Their value as an authorizations base is extensively questioned, as well. MILPERCEN processes PERSACS data in its authorizations data base (AUDB) and in its enlisted requisition validation (REQVAL) system and frequently makes comparisons of PERSACS, AUDB, and REQVAL results only to find that they are at variance. This type of data variance is related to processing and not to PERSACS, though PERSACS is frequently given credit for the variance. Part of the PERSACS problems at MILPERCEN are not with PERSACS data but with the method of processing and utilizing PERSACS data. In essence, because PERSACS requirements and authorizations data are utilized in most MILPERCEN functions, all problems with such data are immediately related to PERSACS. It is essential that MILPERCEN requirements and authorizations problems be researched through their processes, programs, and systems to trace the problem to its true source. Only through this method will true PERSACS problems be identified and other requirements and authorizations data problems identified with whatever processing is at fault.

IMPACT:

- The general lack of understanding of the pervasiveness and importance of the SACS results in a lack of attention to quality control and cooperative management of all supporting systems.
- The general lack of understanding of processes by which PERSACS data are handled cause problems to be attributed to PERSACS when the problem may be in the processing logic employed by another system in utilizing PERSACS data.
- Inaccurate data in systems that provide data to SACS are magnified in both the LOGSACS and PERSACS.
- Army planning, programming, and budgeting which is based on erroneous data can have devastating and long range effects.

APPENDIX B

DATA EDITS

APPENDIX B

SUBJECT: Data Edits

PROBLEM STATEMENT: SACS has no data value edits or data compatibility edits.

EXPLANATION/CAUSATIVE FACTORS: The concept designed into SACS is that all data will correctly interface; that all data values are accurate; and that all data values relate and are compatible with all other data values.

Many data elements passed to the SACS have had either no edit or an ineffective edit applied in the system that has primary data element responsibility. Some examples are:

- Category Code. SACS obtains this code from FAS. It identifies MTOE units by category of combat, combat support, or combat service support. This code field currently has as many blank entries as coded entries. Since blanks are accepted, minimal confidence can be placed in coded entries. This code is used by MILPERCEN.
- Identity Code. SACS obtains this code from TAADS. *TOE does not contain this code* and it is poorly maintained in TAADS. This code is important to MILPERCEN in processing assignments since it is the indicator which specifies requirements and authorizations by male, female, or either.
- Split Unit Indicator. SACS obtains this code from FAS. It should be confirmed in FAS through monthly interface with the Army Operations Center (AOC) systems. This code is used by MILPERCEN for purposes of assignments and reassignments, and by DESCOM for distribution of equipment. The split unit indicator can indicate that a subunit of a parent unit is at a different geographical location from that of the parent unit or that a unit has

split functional entities at the same location. In FAS, this situation should be handled like two parent units and TAADS documentation must be similarly separated because of the geographical location. TAADS identifies split units with a \$ sign. Neither FAS nor TAADS currently document geographically split units satisfactorily.

- Standard Requirements Code. SACS obtains this code from FAS and TAADS. FAS SRC input is not edited whereas TAADS SRC field input is edited. When FAS and TAADS comparison results in a mismatch and the FAS SRC is in error, the unit can be dropped from the SACS computation. Additionally, BOIP and SHN utilize SRC. It is a critical data element to SACS and all force structure systems.

The examples cited above represent only a partial list.

Many data elements passed to the SACS have relationship/compatibility/supportability values when utilized in analyzing an entire record or series of records. Some of these codes are:

- Administrative Control Code^{*}
- Assignment
- DA Master Priority List
- DA Planning Priority List
- Deployment Package Assignment
- Deployment Designation
- Location Code
- Mobilization Command Assignment
- Mobilization Location Code
- Mobilization Period
- Mobilization Station

^{*}As presently coded in FAS, it conflicts with JCS Pub. 1 and 6.

- Readiness Objective Code
- Station Code
- Military Occupational Specialty
- Grade

These codes have some relationship values which must be compatible and supportive in order for each record to be completely useable in both the personnel and logistics functions. This list is not intended to be complete. At least two or more of the listed codes must be compatible because of their relationship. Administrative control, for example, must be compatible with assignment and either DAMPL or DAPPL depending on the effective date. Also, deployment package assignment must agree with administrative control code.

IMPACT: The most serious impact of the absence of positive data value and compatibility edits is the erosion of confidence in and creditability of SACS products. This feeling causes users to design edit procedures into their systems to identify SACS data errors and time and effort are expended to correct these errors before continuing with the intended use of the SACS products. In many cases where incompatibilities of data are identified, SACS users have no way of identifying the incorrect data and, therefore, all data in the record is suspect. In other instances, where corrections can be made, an inordinate amount of time is utilized to make corrections.¹

In other cases where errors are identified and the user has no way of correcting the error, the user will use other sources of requirements and authorization data. Comparisons to other sources which are as of different dates and produced for significantly different purposes result in attempts to validate SACS data with noncomparable data. Also, because the TAADS system is well known and, because it is generally readily

¹This was reported by MILPERCEN, RDAISA, and DESCOM. One MILPERCEN employee stated that it usually takes five work days to correct PERSACS. DESCOM cited a specific figure of 64 hours required to correct LOGSACS. RDAISA was unable to provide a specific estimate of amount of time consumed.

available, SACS users use it as a validation tool. *Since individual TAADS reports do not represent the total Master Force which is represented in the SACS products, this is also noncomparable data.*

The end result is that a significant amount of manpower and systems resources are wasted at many activities in identifying and correcting errors which should have been corrected in a related system prior to the SACS processing.

APPENDIX C
DATA AUDITS

APPENDIX C

SUBJECT: Data Audits

PROBLEM STATEMENT: LOGSACS and PERSACS are frequently incomplete in that some units or personnel and/or equipment detail data may not be included.

EXPLANATION/CAUSATIVE FACTORS: There is no current quality control technique to provide assurance that all units and their applicable detail are included in SACS outputs. Therefore, ODCSOPS (DAMO-FDA) frequently releases SACS outputs only to be subsequently advised by SACS users that they are incomplete.

Units that are recorded in FAS, to which SACS "force selection criteria" are applicable, should be completely represented in SACS output by data which describes the unit, its personnel, and its equipment for all time periods reflected in the FAS. Under current SACS processing, entire units or personnel and/or equipment detail may be omitted from SACS products because the unit detail is not available in TAADS.

Current ODCSOPS (DAMO-FDA) procedures include the use of automated programs (PAAS and BOIMARS) to evaluate the principal SACS products. These programs serve their intended purpose to evaluate and analyze some aspects of the SACS outputs. The shortcoming of these programs is that they do not carry their evaluation and analysis far enough to assure that all units that should be included in a SACS run are, in fact, included in the output, and that for those units the personnel and equipment detail are present.

IMPACT: Data omissions cause delay in the systems that utilize SACS data and require that SACS users have a data correction capability built into their systems. The rerunning of SACS is sometimes required. In

instances where data omissions are not detected, entire computation processes may be completed in error.

More importantly, logistics and personnel functional managers use SACS data/reports not realizing that all the units representing the Master Force are not included in the output. This can cause significant shortfalls in the acquisition and distribution of equipment and personnel.

APPENDIX D
FEEDBACK/CORRECTIVE MECHANISM

APPENDIX D

SUBJECT: Feedback/Corrective Mechanism

PROBLEM STATEMENT: SACS, FAS, TAADS, and TOE are independent systems. They do not have feedback, corrective, or interfacing mechanisms for resolving erroneous data conditions.

EXPLANATION/CAUSATIVE FACTORS: SACS does not have the capability to perform data corrections within its processing cycle. The FAS, TAADS, and TOE have the capability to correct data within their respective operations. However, the operating parameters of each of these systems are independent of each other and erroneous conditions between the systems are not easily resolved because of different processing time sequences and different/various organizational origins within ARSTAF and field commands.

Erroneous data conditions in single systems are not easily corrected because of the various documents that can be in float at any point in time. Multiple FAS transactions for a single UIC may be in float simultaneously. These transactions may be originated by Force or Command Manager, AUTS, SIGMA, or VFAS (command plan or troop list). While FAS transactions are in float, other system transactions continue to flow on their schedule. As some errors are corrected others are developed. In some instances it takes two or more SACS cycles to complete corrections. Current system operating concepts require too much time to correct erroneous data.

Once SACS Branch personnel (DAMO-FDA) or SACS product users identify data errors or problems, they have no established correction mechanism at their disposal. The SACS Branch personnel are responsible for SACS data, yet there is no procedure available to them for correcting or influencing day-to-day force structure systems data maintenance. The current practice is that SACS Branch personnel coordinate with the appropriate functional

personnel to correct data problems. The SACS data users, however, in some cases have built into their systems the capability to correct SACS data. Frequently, users of SACS products correct data from one run with hope that the data will be correct on the next SACS. Upon receipt of the next SACS, the same errors are often still not corrected because there is no procedure for these errors, or their corrections, to be fed back to the appropriate systems.

IMPACT: SACS data users devote scarce resources to correcting SACS data. Although the time spent is justifiable for the individual user to be effective in performing his function, there is no procedure to share the correction with other users. Even more significant is the fact that there is no procedure to feed the correction back to SACS so that subsequent SACS products will reflect the correct data. This continual requirement to identify and correct errors only serves to exacerbate the lack of creditability of SACS products.

APPENDIX E
BOIP AND SHN IN PERSACS

APPENDIX E

SUBJECT: BOIP and SHN in PERSACS

PROBLEM STATEMENT: The absence of BOIP and SHN application in PERSACS creates a fundamental difference in the quality of data between the LOGSACS and PERSACS.

EXPLANATION/CAUSATIVE FACTORS: The BOIP and SHN apply to the introduction of new equipment into units, the refinement of unit detail data, and the insertion of unit detail when it is not available from either TAADS or TOE. The absence of the use of BOIP in PERSACS means that the personnel data applicable to new equipment are not automatically reflected in SACS although BOIP data are reflected in LOGSACS.

The BOIP does include equipment modernization data such as Qualitative and Quantitative Personnel Requirements Information. This QQPRI is reflected in the BOIP for the applicable SRC by MOS, branch, grade, and plus and/or minus quantity. Since PERSACS does not include BOIP data, MILPERCEN personnel must attempt to manually change personnel requirements data, based on their understanding of BOIP information, to compensate for the lack of the application of BOIP. These efforts are generally inadequate and not in consonance with the application of BOIP in LOGSACS.

The SHN are used in LOGSACS to refine LIN data or to add LIN data. The absence of a similar capability for PERSACS to modify personnel data means that some units have less accurate personnel detail and some units have no personnel detail. Either situation is unsatisfactory as all units and their respective detail data must be reflected as accurately as possible in both LOGSACS and PERSACS.

IMPACT: Some new systems equipment and personnel requirements and authorizations are not included in SACS. MILPERCEN is forced to rely on data collected via "stubby pencil" or on data obtained from other sources as the information necessary to support recruiting and training requirements for the equipment modernization programs.

A great amount of manpower is consumed in locating and applying "informal" information to PERSACS where a void exists because BOIP and SHN are not applied to PERSACS during initial processing.

APPENDIX F

DATA MANAGEMENT

APPENDIX F

SUBJECT: Data Management

PROBLEM STATEMENT: Responsibility for data, file, and consolidated system management is fragmented and inadequate.

EXPLANATION/CAUSATIVE FACTORS: The data extracted from supporting systems by the SACS processes for inclusion in the LOGSACS and PERSACS products contain numerous errors and omissions. This is primarily due to a lack of adequate data management. SACS extracts data from five supporting systems: FAS, TAADS, TOE, BOIP, and SHN. Each of these systems has data management procedures which may be adequate for their individual purposes; however, cumulatively the data management is inadequate for SACS purposes. The data is not being managed with the knowledge of the serious impact data from other systems have on the overall operation of the Army. Another aspect is the lack of coordinated data management between supporting systems. Table F.1 lists SACS related systems, their update frequency, and other relevant details. For SACS purposes, DAMO-FDA is responsible for LOGSACS and PERSACS data but does not have control over data inputs to feeder systems.

Some examples of data management inadequacies are as follows:

- Identity code is described in Appendix B. When SACS data are extracted from TAADS the identity code is included. When TOE data are used in SACS the identity code is not included. Currently, approximately 45,000 identity codes are in error and 129 identity codes are blank.
- The FAS Note file is established each year by adding one out year to the M Force as a result of the TAA. From this point through the execution year little attention is given the FAS Note file although *it is important to SACS since it is utilized for the automated process called "SRS Assembly."* When the FAS SRC is in error, a TAADS matching problem is

TABLE F-1
SACS RELATED SYSTEMS INFORMATION

System/Data	Update Frequency	SACS Responsible Agency	Feeder/ Coordinating Agency	SACS Purpose	Remarks
AFP	Daily	DAPE-MBA	DAMO-FDP	Target totals-strength balancing	AFP strength totals by MACOM are used for comparison of SIGMA Target Totals prior to basic SACS processing
FAS	Daily or as required	DAMO-FDA	DAMO-OD DAMO-FDF DAMO-FDP DAPE-MBA	Unit and strength control	Units must exist in FAS to be included in a SACS computation. FAS strengths are basis for factoring. If TAADS or TOE strengths are at variance
TAADS	SA(MOC) ¹	DAMO-FDU	DALO(DARCOM) DAPE-MBA	Primary source for personnel and equipment detail data	
TOE ² Computational	SA,M ³	DAMO-FDA	TRADOC DAMO-RQI	Alternate source for personnel and equipment detail data	
BOIP	Q,AR	DAMO-FDA	DAMO-RQR DALO-SHD TRADOC	Provides modernization data regarding personnel and equipment	Currently used for LOGSACS only. The personnel information is not available to PERSACS
SHN	Q,AR ⁴	DAMO-FDA	DAMO-RQR	Used for fine-tuning LOGSACS or providing equipment detail when required	

¹ MOC windows are from Jan through Mar and Jul through Sep each year.

² Includes automated unit reference sheets (AURS).

³ Consolidated TOE changes are issued during Apr and Oct. Updates are issued all other months.

⁴ Shorthand notes are developed for each LOGSACS as required.

presented. SRC as input to FAS for the PROFA (FORFA) file is not edited. The SRC in the FAS Note file is similarly not edited nor is the FAS Note file synchronized with the PROFA file. Also, when SRC entries in PROFA and FAS notes are not coordinated, negative personnel and equipment requirements are frequently generated.

- Grade and MOS changes are mostly initiated at unit, installation, or commands rather than at HQDA. Most of these changes are MACOM approved, which means that requisitions may be submitted to MILPERCEN prior to TAADS data being submitted to HQDA and prior to SACS providing such data back to MILPERCEN for requisition validation. Grade and MOS changes not based on increased or decreased strengths should be controlled in a cyclic manner from HQDA.
- POMCUS identification is the third position of ROBCO for active Army units, whereas for reserve units, the note reference data element field is used for POMCUS identification. Some units are incorrectly coded while many active Army units have blank ROBCO. POMCUS identification is important. RDAISA and DESCOM personnel currently spend much time and effort in attempting to properly identify POMCUS units so that processing and attendant POMCUS stockage computations are correct. *POMCUS identification should be a separate data element and closely managed.*
- ADCON is defined in JCS Publications 1 and 6 as the data element for the unit identification code of the senior unit (HQ) exercising administrative control over the organization. The Army is currently using the mnemonic ADCON to identify deployment package and deployment date. The ADCON duplicates other deployment data elements in FAS such as ROBCO, DEPLO, and DPMNT, and some of the mobilization data. In some instances, DAMPL or DAPPL, as currently used with ADCON, are incompatible when used in conjunction with assignment and location codes.

- SACS documentation is outdated. The current SACS users' guide contains a data element dictionary, but it is outdated and of little value. Problems that cause questions to be asked are frequently unresolved because answers such as "I don't know," are frequently the only answer available. This is in part because of frequent turnover of personnel and lack of complete and current documentation.
- There is no management across systems. For example, the split unit code is frequently in error or not properly used, yet it is a code in FAS, TAADS, and AOC's UIS. There is no positive continuing interface data quality assurance program to guarantee accuracy and increase user's confidence in SACS data. The split unit indicator is important to both equipment and personnel distribution to ensure that the correct destinations are used in orders, shipping instructions, etc.
- Data flow constraints, because of the 90-day MOC window, apply to MACOM submission of TAADS data to HQDA. This data constraint does not similarly apply to FAS, VFAS, and issuance of original PBG guidance or monthly guidance changes. The MOC constraint is somewhat unrealistic because it applies to TAADS data flow only, and to no other data flow involving other systems that feed information to SACS. The MOC constraints limit TAADS to 90-day submissions, while permitting force structure decisions to be made and recorded in all other systems daily or "as required." Consequently, during two 90-day periods each year, HQDA is not provided current decision data on how units are documented in the force. The MOC data flow restrictions should be examined with a view toward applying some type of uniform flow restriction on all force structure information.

The above examples of data inadequacies make the ODCSOPS force structure systems unwieldy and very complex to manage. It is important to remember that the systems that must currently interface were

not originally designed with the current SACS interface requirements in mind. Therefore, SACS frequently has problems putting the LOGSACS and PERSACS pieces together to make meaningful products.

Data management implies control. Control from the SACS viewpoint should encompass the data and their collection and processing systems that feed the SACS processes to develop the PERSACS and LOGSACS products. The second method of control is the day-to-day management of data within the related manual procedures and at the manual-automated interface. This is as much a management of the attitude toward quality of data as it is a management of data.

Another dimension is the managers awareness of the use of data and the requirements for its high quality. Many staff members and managers are "experts" in their special area but lack the comprehensive understanding of the pervasiveness of SACS. There must be an understanding that quality control efforts are not just impacting the individual system, but have exceedingly more important and far reaching impacts on the entire Army from Congressional action in the Army budget to distribution of personnel and equipment to a unit. This requires a knowledge of and interest in the total SACS which is not now being demonstrated. This lack of knowledge impacts negatively on data management and the products of SACS. There is no overall centrally controlled data management concept in use within the ARSTAF.

IMPACT: The overall impact of inadequate data management is uncoordinated and, in some cases, unacceptable and unusable outputs. Lack of control leads to data omissions which can result in excessive SACS computation time. Incompatibility of data values between data elements in single records cause confusion, conflict, and effort to be spent to determine which values are correct. Data value errors corrected in one supporting system are not fed to the other systems thereby causing duplication of effort. The data flow timing restriction (MOC) is applicable to only one of five supporting systems, which contributes to some untimeliness.

APPENDIX G

SOURCE OF REQUIREMENTS AND AUTHORIZATION DATA

APPENDIX G

SUBJECT: Source of Requirements and Authorizations Data

PROBLEM STATEMENT: Requirements and authorizations data are provided to the ARSTAF from at least two sources and to field activities from three or more sources.

EXPLANATION/CAUSATIVE FACTORS: The current Army practice regarding the source of "official" requirements and authorization data is not completely clear. AR 310-49 makes a clear statement that TAADS is the source of documented requirements and authorizations data for personnel and equipment transactions. However, the current Army practice is to utilize SACS products for requirements and authorizations for validating personnel and equipment requisitions and for other purposes. This practice is appropriate, since SACS provides information constrained by FAS units and strengths. Requirements and authorizations information, however, are provided to the ARSTAF and field activities from a number of other sources, which cause confusion, conflict between data, and erosion of confidence in any one data source.

The current sources of requirements and authorizations data are:

- LOGSACS and PERSACS products
- HQDA TAADS (constrained by FAS UIC and EDATE)
- MACOM - VTAADS
- Installations - ITAADS
- Units - Unit documents

The contents of LOGSACS and PERSACS have been constrained by resource limitations as reflected in FAS. Also, the LOGSACS utilizes the BOIP and SHN note information; and, in the reasonably near future PERSACS should be changed to utilize BOIP and SHN. The data prepared in a SACS computation represents the Army's requirements and authorizations, limitations, and future equipment modernization program. These last two

aspects are critical to all requirements and authorization users for their planning, programming, and budgeting actions, if not current actions.

The HQDA TAADS retrieval data base is established three times each month (on the 10th, 20th, and 30th) for report preparation purposes. Inclosure G-1 is a list of reports that are prepared on an "as required" and/or a recurring basis from this data base. This "retrieval data base" is extracted from the Authorizations Subsystem (AS) of FORDIMS and constrained by matching it to FAS on UIC and EDATE. Mismatched TAADS/FAS data identified in this process restrict the TAADS from being available in the TAADS retrieval data base. Despite the fact that this data base is usually incomplete and does not represent the same data picture, at any point in time, as the SACS products, it is used extensively as a source for many reports provided to the ARSTAF and field activities.

The MACOM - VTAADS is utilized as a source of data for making and defending decisions. The MACOM - VTAADS and VFAS have no current automated interface; therefore, the only VTAADS and VFAS exchange of data is through manual means. MACOMS provide requirements and authorizations data to HQDA and to installations and units through VTAADS. These data are frequently at variance with those which are in the possession of functional users of requirements and authorizations information at MILPERCEN, DESCOM, and RDAISA, primarily because of EDATE timing and data flow (MOC).

Installations and units, at the bottom of the requirements and authorizations ladder, must make the system work for them because as the "bottom line" operators they must perform their assigned missions. The requirements and authorizations that appear on the latest authorization document (TAADS) are the basis for the unit commander's personnel and equipment requisitions, regardless of the applicable time period as determined by an EDATE. Frequently, even at the bottom, requirements and authorizations are controversial between the Force Structure, Personnel Managers, Logistical Managers, and Unit Personnel. This usually results from lack of coordinated communications and other implications

such as the installation systems and their source of requirements and authorizations data.

IMPACT: Each agency's position is defended using "best information available." The impact of not "reading off the same sheet of music" is conflict, mistrust of "the other agency's data" and a continual effort for each agency to validate data.¹ Controversial requirements and authorizations data are currently resolved by acquiescing to unit-provided authorization data (right or wrong), cancelling the requisition or delaying final action until validation of authorization is received.

Drawn out disagreements on requirements and authorization data between ARSTAF and MACOMS cause extensive delays and confusion at MILPERCEN, DESCOM, RDAISA, and other agencies, and cause turmoil among the personnel assigned to the functions that must utilize such data.

¹One senior MILPERCEN official referred to the process of attempting to clarify requirements and authorizations data as like "blind flying."

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DALO-TSM-P 10616 PENTAGON	RAILWAY EQUIPMENT LIN SEQ	PH0443	PG007472	M	1	P	1	
DANA-ADM 30416 PENTAGON	SSN/LIN REPORT TAADS	PH0594	PH022274	Q	1	X	1	
DAMO-FDA 3C460 PENTAGON	MICROFILM TAADS MASTER	PH0698	PH000274	A	2	C	1	D
DAMO-FDA-1S 10469 PENTAGO	CLUB MANAGEMENT RETR	PH0414	PH005178	M	1	P	1	
DAMO-FDA-SACS 10460 PENTA	MTOE COMPOSITE/SELECTED D	PH0595	PH016277	Q	3	C	1	
DAMO-FDA-SACS 10468 PENTA	DEL MICROFILM CARTRIDGES	PH0522	PH000972	Q	7	C	1	
DAMO-FDF 10475 PENTAGON	TDA STRENGTH BY AMSCODE	PH0512	PH058272	Q	1	X	1	D
DAMO-FDF 10483 PENTAGON	MTOE COMPOSITE/SELECTED D	PH0595	PH016277	Q	3	X	1	
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DAMO-RQR 28522 PENTAGON	AIRCRAFT RETRIEVAL TAADS	PH0522	PH000972	Q	7	C	1	
DAMO-RQR 2C543 PENTAGON	DEL MICROFILM CARTRIDGES	PH0596	PH037776	Q	1	P	2	
DAMO-RQR 2C543 PENTAGON	TDA HEADER LIST	PH0522	PH000972	Q	7	C	1	
DAMO-RQR 2C543 PENTAGON	MTDE UNITS STUDY REPORT	PH0411	PH037974	M	2	P	1	D
DAMO-RQR 34462 PENTAGON	AIRCRAFT LIN EXTRACT TAAD	PH0578	PG001373	Q	4	X	2	D
DAMO-RQR 30489 PENTAGON	AVIATOR MOS EXTRACT	PH0581	PH004572	Q	1	P	1	U
DAMO-RQR 30489 PENTAGON	US-GOEFICER AVIATOR RETR	PH0577	PH000172	Q	1	P	1	U
DAMO-RQR 34516 PENTAGON	FOREIGN AREA SPECIALISTS	PH0469	PH062073	M	1	P	1	D
DAPC-EPH-L MILPERCEN	TAADS 9 ENLISTED ASI'S	PH0530	PH040378	Q	2	P	1	
DAPC-EPH-L MILPERCEN	NGOLP AUTH SOT-EK ACTIVE	PH0507	PG004577	Q	5	X	2	
DAPC-EPH-L MILPERCEN	NGOLP AUTH SOT-EK NG/AR	PH0503	PG004577	Q	5	X	2	
DAPC-EPH-L MILPERCEN	TAADS ENLISTED ASI EXTR	PH0529	PH034578	Q	1	P	1	
DAPC-EPH-L MILPERCEN	AIRCRAFT POSITIONS OS	PH0487	PH031376	M	1	X	1	
DAPC-EPH-L MILPERCEN	DETAIL AVIATOR REPORT	PH0401	PG011374	M	5	X	1	
DAPC-EPH-L MILPERCEN	OFFICER PSC D'TAIL RPT	PH0499	PG009576	M	1	X	2	D
DAPC-EPH-L MILPERCEN	PSC REPORT CMD SEQ	PH0532	PH058875	Q	1	X	1	
DAPC-EPH-L MILPERCEN	PSC REPORT UIC SEQ	PH0531	PH058875	Q	1	X	1	
DAPC-EPH-L MILPERCEN	PSC SUMMARY REPORT	PH0507	PG009676	Q	1	X	1	
DAPC-EPH-L MILPERCEN	FOREIGN AREA SPECIALISTS	PH0407	PG004477	A	2	X	1	
DAPC-EPH-L MILPERCEN	DETAIL ASI/LIC RETRIEVAL	PH0623	PG021076	A	1	X	1	
DAPC-EPH-L MILPERCEN	DETAIL AVIATOR REPORT	PH0401	PG011374	M	5	X	2	
DAPC-EPH-L MILPERCEN	AIRCRAFT/AVIATOR TAADS	PH0516	PH034374	Q	1	P	1	
DAPC-EPH-L MILPERCEN	MOS DUTY POSITION REPORT	PH0606	PH003472	A	7	X	1	
DAPC-EPH-L MILPERCEN	MICROFILM TAADS MASTER	PH0598	PH000274	A	2	C	1	D
DAPC-EPH-L MILPERCEN	CIVILIAN CATEGORY SUMMARY	PH0514	PG007774	Q	1	P	1	
DAPC-EPH-L MILPERCEN	DETAIL AVIATOR REPORT	PH0401	PG011374	M	5	X	1	D
DAPC-EPH-L MILPERCEN	TDA PARENT UNIT SUMMARY	PH0431	PH003872	M	3	P	2	

ADDRESS (OFFICE SYMBOL)	REPORT TITLE	JOBNUM	MARSDATA	TYPE	CUSTOMERS	OUTPUT	COPIES	DELETED
DAPE-PBA 24672 PENTAGON	GRADE AVERAGE REPORT	PH0621	PG014676	A	2	X	1	
DAPE-PBA 20526 PENTAGON	ASI-LIC-RMK COUNT	PH0453	PG002872	M	1	P	1	D
DAPE-PBA 20526 PENTAGON	AVIATOR 06-GENERAL RETR	PH0579	PG002574	Q	1	P	2	U
DAPE-PBA 20526 PENTAGON	COMPO 213 OFFICER INTERCH	PH0586	PH005274	Q	1	X	3	D
DAPE-PBA 20526 PENTAGON	COMPO1 OFFICER INTERCHANG	PH0584	PG005472	Q	1	X	3	D
DAPE-PBA 20526 PENTAGON	COMPO1 OFFICER RETRIEVAL	PH0589	PG006574	Q	1	X	6	D
DAPE-PBA 20526 PENTAGON	COMPO2/3 OFFICER RETRIEVA	PH0587	PG006574	Q	1	X	3	D
DAPE-PBA 20526 PENTAGON	MALE FEMALE INTERCHANGE	PH0583	PG003275	Q	2	X	3	D
DAPE-PBA 20526 PENTAGON	MTOE UNITS STUDY REPORT	PH0578	PG001373	Q	4	X	1	U
DAPE-PBA 20526 PENTAGON	RR/EO POSITION EXTRACT	PH0582	PG000174	Q	1	X	3	D
DAPE-PBA 20526 PENTAGON	SUMMARY INTERCHANGEABLE	PH0597	PG001574	Q	1	X	6	D
DAPE-PBA 20526 PENTAGON	MTOE PARENT UNIT SUMMARY	PH0409	PG000472	M	3	X	1	D
DAPE-PBA 20526 PENTAGON	MASTER HEADER LIST-TAADS	PH0460	PG001072	M	5	X	2	D
DAPE-PBA 20526 PENTAGON	ENLISTED GRADE IMBALANCES	PH0415	PG000275	M	1	X	1	D
DAPE-PBA 20526 PENTAGON	MOBILIZATION TOA STRENGTH	PH0506	KD002276	Q	2	X	1	D
DAPE-PBA 20526 PENTAGON	TOA STRENGTH BY AMSCODE	PH0535	PH005679	Q	1	X	1	D
DAPE-PBA 20526 PENTAGON	TSG PERSONNEL TAPE	PH0454	PH008174	M	1	T	1	D
DAPE-PBA 20526 PENTAGON	MASTER HEADER LIST-TAADS	PH0460	PG001072	M	5	X	1	D
DAPE-PBA 20526 PENTAGON	MULTI/LIN EXTR BY STACO	PH0428	PH076676	M	1	T	1	D
DAPE-PBA 20526 PENTAGON	DEL MICROFILM	PH0524	PH002972	Q	1	T	6	D
DAPE-PBA 20526 PENTAGON	COMMAND TAPES-MIDA/RCPAC	PH0483	PH015975	M	1	T	4	D
DAPE-PBA 20526 PENTAGON	REDSTONE MDS EXTRACT	PH0510	PH053075	Q	1	P	2	D
DAPE-PBA 20526 PENTAGON	MASTER HEADER LIST-TAADS	PH0460	PG001072	M	5	X	2	D
DAPE-PBA 20526 PENTAGON	CAA TAADS TAPES	PH0599	PH081576	Q	1	T	1	D
DAPE-PBA 20526 PENTAGON	DEL MICROFILM CARTRIDGES	PH0522	PH000972	Q	7	C	1	D
DAPE-PBA 20526 PENTAGON	MTOE COMPOSITE/SELECTED S	PH0301	PH016277	Q	4	X	2	D
DAPE-PBA 20526 PENTAGON	8 TAADS TAPES FOR CAA	PH0521	PH002078	Q	1	T	8	D
DAPE-PBA 20526 PENTAGON	DEL EQUIPMENT TAPES	PH0584	PH001972	Q	1	P	3	D
DAPE-PBA 20526 PENTAGON	NG/AR LIN SUMMARY	PH0522	PH000972	Q	7	C	1	D
DAPE-PBA 20526 PENTAGON	DEL MICROFILM CARTRIDGES	PH0606	PH003472	A	7	X	1	D
DAPE-PBA 20526 PENTAGON	MOS DUTY POSITION REPORT	PH0480	PH000772	M	1	T	1	D
DAPE-PBA 20526 PENTAGON	COMMAND TAPES-EUROPE	PH0459	PG890073	M	1	T	2	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0462	PG890073	M	1	T	3	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0461	PG890073	M	1	T	3	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0463	PG890073	M	1	T	3	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0458	PG890073	M	1	T	2	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0457	PG890073	M	1	T	2	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0456	PG890073	M	1	T	3	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0454	PG890073	M	1	T	2	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0453	PG890073	M	1	T	2	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0452	PG890073	M	1	T	6	D
DAPE-PBA 20526 PENTAGON	ALTERNATE SITES FILES	PH0451	PG900073	M	1	T	1	D
DAPE-PBA 20526 PENTAGON	UPDATE TACTICAL VEHICLES	PH0406	PG002374	M	0	P	0	D
DAPE-PBA 20526 PENTAGON	CHAPLAIN EXTRACT	PH0450	PH022075	M	0	P	0	D
DAPE-PBA 20526 PENTAGON	UPDATE INDIVIDUAL WEAPONS	PH0407	PH050775	M	0	P	0	D
DAPE-PBA 20526 PENTAGON	AIRCRAFT RETRIEVAL TAADS	PH0593	PH037776	Q	0	P	0	D
DAPE-PBA 20526 PENTAGON	COMMAND RETRIEVAL MIDA	PH0479	PH015975	M	0	P	0	D
DAPE-PBA 20526 PENTAGON	COMMAND TAPES-MIDA	PH0482	PH015975	M	0	P	0	D

ADDRESS (OFFICE SYMBOL)	REPORT TITLE	JOBNUM	MARS DATA	TYPE	CUSTOMERS	OUTPUT	COPIES	DELETED
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-MIDA	PH0481	PH015975	M	0	P	0	
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-MIDA	PH0486	PH015975	M	0	P	0	D
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-MIDA	PH0485	PH015975	M	0	P	0	D
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-MIDA	PH0484	PH015975	M	0	P	0	D
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-RCPCAC	PH0477	PH001272	M	0	P	0	
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-RCPCAC	PH0476	PH001272	M	0	P	0	
SDD-MSR BC1034A PENTAGON	COMMAND TAPES-RCPCAC	PH0475	PH001272	M	0	P	0	
SDD-MSR BC1034A PENTAGON	DOCUMENT STRENGTH CHANGES	PH0498	PG011077	M	0	P	0	D
SDD-MSR BC1034A PENTAGON	LSALDSRA COPY TAPES	PH0610	PH001572	A	0	P	0	D
SDD-MSR BC1034A PENTAGON	OEL MICROFILM	PH0520	PH000972	Q	0	P	0	
SDD-MSR BC1034A PENTAGON	UPDATE ADMIN VEHICLES	PH0523	PH002972	Q	0	P	0	
SDD-MSR BC1034A PENTAGON	TAPES 9 ENLISTED ASI'S	PH0405	PG002274	M	0	P	0	
SCPE-EDI MEDDPER HALF ST	ABERDEEN TAPES TAPES	PH0530	PH040378	Q	2	P	1	
STEAP-MO DPT-1701 APG MD	DETAIL AVIATOR REPORT	PH0592	PH048576	Q	1	T	1	
USAFVNS FT. RUCKER	TAADS TAPE FOR CAA (MIDA)	PH0401	PG011374	M	5	X	1	
USACAA-MOCA-FDP BETH. MD		PH0614	PH064678	A	1	T	1	

APPENDIX H

SPECIFIC PERSACS/LOGSACS TIMELINESS AND ACCURACY PROBLEMS

APPENDIX H

SUBJECT: Specific PERSACS/LOGSACS Timeliness and Accuracy Problems

PROBLEM STATEMENT: PERSACS/LOGSACS timeliness and accuracy problems erode confidence in SACS data and detract from their acceptance and use in various functional systems for personnel and logistics management.

EXPLANATION/CAUSATIVE FACTORS: Inclosure H-1 is a list of specific examples of timeliness and accuracy problems which are representative of the difficulties that users are experiencing with PERSACS and LOGSACS data as a result of items cited in previous appendixes. The twenty-six entries primarily pertain to the October 1978 PERSACS and LOGSACS. SACS products from other time periods are also involved. These cited problems are typical of those being experienced with the use of each PERSACS and LOGSACS.

The specific problems resulting from the use of erroneous LOGSACS and PERSACS data, as shown by the attached list are documented problem areas. Another significant problem is the excessive amount of time various users spend in validating the LOGSACS and PERSACS data/reports *prior* to their use. This problem is not directly documented in hours spent in "purifying" SACS data. It is, however, the basic cause for dissatisfaction such as was expressed in a Memorandum for the Director of Personnel Management Systems, Subject: PERSACS Problem Areas--Information Memorandum, dated 5 Dec 1978 from the Director of Enlisted Personnel, MILPERCEN.

In interviews, MILPERCEN personnel have stated that from 15 to 25% of their time is spent in analyzing SACS reports, validating with other data sources and correcting errors *prior* to being able to use SACS reports. This frustration was uniformly expressed by virtually all MILPERCEN personnel interviewed during this portion of the study.

Another impact of the erosion of the creditability of SACS is the development and operation of parallel validating systems--both manual and automated. In an effort to assure that SACS data is in fact right, staff managers request additional reports from other systems and develop an informal, off-line, manual management validation system tailored to their individual needs. The cumulative manhours expended by staff managers in developing individual "informal" validation systems is obviously quite extensive. MILPERCEN, RDAISA, and DESCOM have all incorporated procedures in their automated systems to permit alteration of SACS data for correction of identified omissions or inaccuracies.

A further dimension of the problem of accuracy of SACS data is that staff managers tend to falsely blame all inaccuracies on SACS. Major agencies receive SACS tapes and process these tapes using their in-house management information systems. These systems produce a multitude of reports and also have on-line retrieval capabilities. When staff personnel find errors in these reports, they have a tendency to place the blame on SACS without realizing the error could have been developed by the in-house system.

IMPACT: User confidence in SACS products has deteriorated, primarily because of data inaccuracies and omissions.

Inclosure II-1

INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA

<u>ORGANIZATION</u>	<u>PROBLEM</u>	<u>PROBLEM STATEMENT</u>	<u>REMARKS/IMPACT</u>
1. MILPERCEN (DAPC-MSP-OP)	Timeliness Accuracy	Personnel requisitions flow to MILPERCEN subsequent to MACOM approving authorization document. Frequently, MILPERCEN cannot validate the authorization because the unit data in PERSACS does not reflect the correct grades and MOS.	The MOC has added a delay to data flow. The delay is from 90 to 180 days under ideal circumstances. This delay reduces the timeliness of data in PERSACS. See item #11, below and paragraph 3.4.1 of this report.
2. MILPERCEN (DAPC-MSP-OP)	Timeliness Accuracy	No specific mechanism to ensure compliance with details of guidance is in being at the present time or under FORDIMS. Authorizations were understated for military police (MOS95B) by nearly 2,000, while authorizations for other MOS in the units involved were overstated by a similar number because of factoring.	Specific guidance was issued to USAREUR and SOUTHCOM to increase military police (MOS95B) in specific units. Spaces were added to units in FAS. Commands did not comply with guidance in timely manner by documenting the change in TAADS.
3. MILPERCEN (DAPC-MSP-OP)	Accuracy	Personnel detail records contain negative quantities for grade and MOS in some cases.	This problem in PERSACS is caused by improper management of the FAS NOTE file and by PERSACS software not summing unit authorizations. The FAS NOTE file and PROFA (FORFA) file are not automatically linked in the FAS system for systematic update. Statement from DAMO-FDP indicated that the division has no responsibility for NOTE file.
4. ODCSOPS (DAMO-FDP) MILPERCEN (DAPC-PSS-M)	Timeliness Accuracy	Aviation units reorganized without approved TOE. Decision implemented with inadequate planning. Improper and inadequate detail information for personnel distribution.	This was primarily due to the reorganization of aviation resources. MILPERCEN found it extremely difficult to process some enlisted requisitions and make determinations regarding training loads for aviation skills.
5. ODCSOPS (DAMO-FDP) (DAPC-MSO)	Timeliness Accuracy	TRADOC authorizations decremented by approximately 2,000 spaces.	Reduction in training base authorizations. MILPERCEN has no method to translate reduction to units. Also could not identify resources for redistribution/trade-off.
6. MILPERCEN (DAPC-MSP-OP) (DAPC-PSS-M)	Timeliness Accuracy	No personnel detail data available in PERSACS for some units.	PERSACS data is incomplete in situations where TAADS is not matched to FAS for TDA units. No basis for validating requisitions or other personnel actions.

Example Oct '78 PERSACS

UIC

Remarks

WAXF99	No TAADS available
WZCEAA	No TAADS available
WAY3AA	TAADS available
W0Y6AA	TAADS available
W3KXAA	TAADS available
W3KIAA	TAADS available
W3LAAA	TAADS available
W3NIAA	TAADS available
W3AAAA	TAADS available

but not provided
via PERSACS

Inclosure II-1

INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA

ORGANIZATION	PROBLEM	PROBLEM STATEMENT	REMARKS/IMPACT																				
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UIC	Remarks																						
WAXF99	No TAADS available																						
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W3K1AA	TAADS available																						
W3KAA	TAADS available																						
W3N1AA	TAADS available																						
W34AAA	TAADS available																						

INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA (cont'd)

ORGANIZATION	PROBLEM	PROBLEM STATEMENT	REMARKS/IMPACT																																												
7. MILPERCEN (DAPC-MSP-OP) (DAPC-PSS-M)	Accuracy	Approximately 45,000 records have invalid identity codes and 129 have the identity code field blank. This applies to component 1 units only (Active Army). This represents about 10% of the component 1 records in PERSACS.	Identity codes indicate male, female, or either sex can fill a position. The lack of this code means additional research for MILPERCEN prior to filling requisitions. A current extract of TAADS indicates 21,382 officer, 6,467 warrant officer, and 276,641 enlisted personnel positions that have blank identity code. This was based on authorizations as of 31 Mar '79.																																												
8. MILPERCEN (DAPC-MSP-OP) (DAPC-PSS-OP)	Accuracy	The SACS split unit indicator does not truly represent geographically separated elements of the parent unit (PU). The requirements and authorizations are aggregated at PU.	TAADS identifies that portion of a TDA Parent Unit (PU) that is split for geographical or functional reasons with a \$ sign. Since the \$ sign does not discriminate between split for geographical vs split for functional, this TAADS code is not effective. TAADS does not identify split portions of MTOE PU. UICs, where this problem exists, are: WCFZ99, WCY799, WE6499, W05XAA. There are many more units.																																												
9. MILPERCEN (DAPC-MSO)	Timeliness Accuracy	Late introduction of timely and complete data for the Chemical-Electrical Warfare-Intelligence (CEWI) Battalions.	Units were established under tentative TOE with a requirement for 706 personnel. The Dec '78 FAS strength was for 529 personnel with TOE strength still at 706 causing a factored reduction of 177 spaces. (The tentative TOE has since been revised to 529 spaces.)																																												
10. MILPERCEN (DAPC-MSO)	Timeliness Accuracy	Introduction of approximately 9,000 spaces into the force for the Chemical Corps.	This was reported as a problem in PERSACS. HOWEVER, upon checking for confirmation and specific details - it was stated that no specific problem existed except for clarifying several E5 authorizations.																																												
11. MILPERCEN (DAPC-EPS-CP) (DAPC-EPZ-H)	Timeliness Accuracy	Percent compatibility of PERSACS data with requisitioning unit authorization data	Percent compatibilities are attributed to factoring, and different, or newer TAADS documents used by requisitioner. Examples of percentage of compatibility are: <table><tr><th>UIC</th><th>Percentage</th><th>Remarks</th></tr><tr><td>WAZYAA</td><td>40%</td><td>Different documents</td></tr><tr><td>WOYUAA</td><td>68%</td><td>Different documents</td></tr><tr><td>WCURAA</td><td>87%</td><td>Unexplained</td></tr><tr><td>W03FAA</td><td>92%</td><td>Factoring</td></tr><tr><td>W04LAA</td><td>92%</td><td>Different document</td></tr><tr><td>W3GCAA</td><td>77%</td><td>Factoring</td></tr><tr><td>W35BAA</td><td>82%</td><td>Factoring</td></tr><tr><td>WCD7AA</td><td rowspan="2">}</td><td rowspan="2">This is a split unit. PERSACS CCNUM reversed from what MACOM was using (CC0179).</td></tr><tr><td>WCB799</td></tr><tr><td>WNU4AA</td><td rowspan="2">}</td><td rowspan="2">This is a split unit, MACOM using a newer document.</td></tr><tr><td>WNU499</td></tr><tr><td>W13LAA</td><td>96%</td><td>October PERSACS data</td></tr><tr><td></td><td>65%</td><td>October PERSACS data projected to Apr '79</td></tr><tr><td></td><td>100%</td><td>October PERSACS data</td></tr><tr><td></td><td>74%</td><td>October PERSACS data projected to Apr '79</td></tr></table>	UIC	Percentage	Remarks	WAZYAA	40%	Different documents	WOYUAA	68%	Different documents	WCURAA	87%	Unexplained	W03FAA	92%	Factoring	W04LAA	92%	Different document	W3GCAA	77%	Factoring	W35BAA	82%	Factoring	WCD7AA	}	This is a split unit. PERSACS CCNUM reversed from what MACOM was using (CC0179).	WCB799	WNU4AA	}	This is a split unit, MACOM using a newer document.	WNU499	W13LAA	96%	October PERSACS data		65%	October PERSACS data projected to Apr '79		100%	October PERSACS data		74%	October PERSACS data projected to Apr '79
UIC	Percentage	Remarks																																													
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INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA (cont'd)

ORGANIZATION	PROBLEM	PROBLEM STATEMENT		REMARKS/IMPACT	
		UIC	Percentage	Remarks	
11. Cont Inued		WCE8AA	This is a split unit.		
		WCE899	MACOM using different document		
			87% October PERSACS data		
		W30NAA	41% October PERSACS data projected by Apr '79		
			70%	Different document	
		WBE3AA	Split unit		
		WGB6AA	Different document		
			Different document		
		WAG9AA	Oct '78 vs Apr '79		
		WDZMAA	Newer document		
			84%	Split unit, different document	
		W1J6AA	Older document		
		WCOGAA	Older document		
		W1Y3AA	Newer document		
		W32MAA	Newer document		
		W36CAA	Newer document		
			90%		

12. MILPERCEN (DAPC-ERS-CP) (DAPC-MSP-OP)

UIC WAT899 to January PERSACS was factored up by 2,588 spaces. Upon checking this was due to a FAS input error.

MOS	E8	E7	E6	E5	E4	E3	MOS TOTAL
03C		31	31		31		62
05C							31
11B		31	124				155
13B		93					93
19B		31					31
19Z	31						31
31E			63				63
45K			31				31
45Z		31					31
51H		31					31
51Z	125						125
56E		31					31
62B		31					31
63B			31				31
63C		31					31
63H		31					31
63Z	63						63
71D			63	63			126
71G			31				31
71H	31	188	188	125		63	595
71Q			31	31			62
73C		94					94
73Z	31						31
74F		31					31
75C				64			64
75Z	31	63	31				125
76P		31					31
76Y		62			31		93
76Z	62						62
94B		31					31
95B	31	62	62				155
96B			31	31			62
96C			31				31
GRADE TOTAL	405	934	810	314	62	63	2588

INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA (cont'd)

ORGANIZATION	PROBLEM	PROBLEM STATEMENT	REMARKS/IMPACT
13. MILPERCEN (DAPC-EFS-0) (DAPC-EFP-A)	Accuracy	Strength fluctuations over EDATES within MOS preclude establishing/projecting firm training requirements and recruiting quotas.	Strength fluctuations within MOS occur with no consistent pattern. Increases or decreases for one or two quarters, create turbulence in training, distribution, etc. Examples are: (BEF = before factoring) (AFT = after factoring)

a. January 1979 PERSACS

MOS	790228		790630		790930		800131	
	BEF	AFT	BEF	AFT	BEF	AFT	BEF	AFT
03C	196	196	197	265	191	256	190	194
11B	13,775	13,772	13,849	14,005	13,395	13,553	13,392	13,621
16B	11,270	1,270	1,270	1,270	1,271	1,458	1,271	1,271
19Z	378	378	382	413	373	405	375	379
24U	304	304	304	304	304	323	304	304
31E	475	475	468	531	472	534	468	468
45K	421	421	412	443	423	454	423	423
45Z	68	69	68	100	69	101	69	70
51H	216	216	217	250	220	283	220	222
51Z	58	58	58	183	58	183	58	59
63B	343	344	347	379	349	382	345	349
63C	5,177	5,178	5,214	5,277	5,155	5,216	5,169	5,202
71D	533	547	535	664	537	672	536	550
71L	5,941	5,947	5,919	6,528	5,889	6,493	5,884	5,932
74F	192	192	194	225	194	225	195	195
75C	642	642	658	726	672	735	674	674
75Z	937	937	958	1,083	962	1,087	965	965

b. October 1977, January 1978, and April 1978 PERSACS with EDATE of 790930

MOS	Oct 77		Jan 78		Apr 78	
	790930	790930	790930	790930	790930	790930
05K	740	740	785	713	713	713
16P	5486	5486	5344	5411	5411	5411
25J	105	105	94	106	106	106
67U	1683	1683	1745	1628	1628	1628
67Y	1726	1726	1939	1841	1841	1841
68D	452	452	374	444	444	444
75C	2158	2158	2424	2195	2195	2195
75D	4083	4083	4631	4205	4205	4205
75E	1330	1330	1416	1291	1291	1291
76D	13071	13071	12793	12932	12932	12932
93J	809	809	969	840	840	840
96D	539	539	760	616	616	616
96H	80	80	63	95	95	95

INCIDENTS OF TIMELINESS AND/OR ACCURACY PROBLEMS IN SACS DATA (cont'd)

ORGANIZATION	PROBLEM	PROBLEM STATEMENT	REMARKS/IMPACT																																																																								
14. MILPERCEN (DAPC-EPZ-H) (DAPC-DPZ-H) (DAPC-HSP-O)	Accuracy	Detailed authorizations (MOS/grade) were omitted from Jan '79 PERSACS for 28 units for specific EDATES.	UIC are: WCR9AA, WCR9AA, W3K9AA, W3H1AA, W348AA, W4C3AA, W4C9AA, W4DCAA, W4DJAA, W03CAA, W07XAA, W07JAA, W1B7AA, W1B8AA, W1B9AA, W2R9AA, W2SCAA, W2SF9AA, W2SHAA, W2SJAA, W2SMAA, W2SRAA, W2STAA, W2SUA, W22NAA, W3HDA, W4C7AA.																																																																								
15. MILPERCEN (DAPC-EPS)	Accuracy	Sixteen enlisted personnel were erroneously sent to Fort Polk because of an incorrect Active Army locator code. Additional personnel may still be enroute as of 9 Mar 79.	AALOC Report indicated a newly organized unit (WAKNAA) was to be activated at Fort Polk. Activation was changed to Fort Riley. This data was initially included in UIS and FAS for Polk and subsequently changed to Riley.																																																																								
16. MILPERCEN (DAPC-MSO-S)	Accuracy	Reorganization of the Signal School at Fort Gordon where two units were to be replaced by one.	UIC: W0U5AA New unit 781101 W2MDAA Old unit 781001 W35EAA Old unit 781001 The first unit was to replace the second and third unit. The October 1978 PERSACS still reflected all three units with T DATES of 999999 continue on in the force.																																																																								
17. MILPERCEN (DAPC-HSP-OP) (DAPC-EFF)	Accuracy	DARCOM units not on Jan '78 PERSACS	UIC: W3B5AA, W3B6AA, W3B9AA, W4A3AA, W4A4AA, W4A5AA, W4A6AA, W4B6AA, W4B7AA, W4B8AA, W4B9AA, W4BQAA, W4BRAA, W4BSAA, W4BTAA, W4BUAA, W4BYAA.																																																																								
18. DESCOM (DRSIS-LDD)	Accuracy	Incompatible header data elements in LOGSACS	Analysis by DESCOM of the Sep and Dec 1978 LOGSACS revealed incompatibility between some data elements in some unit header records such as: DAMPL, Asgmt Code, Location Code, Station Code and ADCON. Some records reflected blanks instead of data element values. Examples are: <table> <tr> <th>Theater</th><th>Data El</th><th>Discrepancy</th><th>No of DISC</th></tr> <tr> <td>Korea</td><td>DAMPL</td><td>CONUS DAMPL</td><td>248</td></tr> <tr> <td></td><td>ADCON</td><td>Europe DAMPL</td><td>1</td></tr> <tr> <td></td><td>Stacode</td><td>Invalid Scenario</td><td>4</td></tr> <tr> <td></td><td></td><td>Europe</td><td>1</td></tr> <tr> <td></td><td></td><td>CONUS</td><td>1</td></tr> <tr> <td>Europe</td><td>DAMPL</td><td>Total Korea Records</td><td>334</td></tr> <tr> <td></td><td>ADCON</td><td>Total Records Suspect</td><td>252</td></tr> <tr> <td></td><td></td><td>Percent of Error</td><td>75%</td></tr> <tr> <td></td><td></td><td>Other than Europe</td><td>19</td></tr> <tr> <td></td><td></td><td>Blank</td><td>33</td></tr> <tr> <td></td><td></td><td>Invalid Scenario/RDD</td><td>56</td></tr> <tr> <td></td><td></td><td>Blank</td><td>10</td></tr> <tr> <td></td><td></td><td>Zero Filled</td><td>2</td></tr> <tr> <td></td><td></td><td>Other than Europe</td><td>1</td></tr> <tr> <td></td><td></td><td>Total Europe Records</td><td>1780</td></tr> <tr> <td></td><td></td><td>Total Records Suspect</td><td>106</td></tr> <tr> <td></td><td></td><td>Percent of Error</td><td>6%</td></tr> </table>	Theater	Data El	Discrepancy	No of DISC	Korea	DAMPL	CONUS DAMPL	248		ADCON	Europe DAMPL	1		Stacode	Invalid Scenario	4			Europe	1			CONUS	1	Europe	DAMPL	Total Korea Records	334		ADCON	Total Records Suspect	252			Percent of Error	75%			Other than Europe	19			Blank	33			Invalid Scenario/RDD	56			Blank	10			Zero Filled	2			Other than Europe	1			Total Europe Records	1780			Total Records Suspect	106			Percent of Error	6%
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		Percent of Error	6%																																																																								

DESCOM reviewed 9,329 records and found 643 (6.9%) to be suspect. To correct these records 64 manhours of effort was required.

INCIDENTS OF TIMELINESS AND/OR ACCURATE PROBLEMS IN SACS DATA (cont'd)

<u>ORGANIZATION</u>	<u>PROBLEM</u>	<u>PROBLEM STATEMENT</u>	<u>REMARKS/IMPACT</u>
19. DESCOM (DRSDS-LDD)	Accuracy	Readiness Objective Code (ROBCO) is not being used properly.	A lack of consistency was noted in that DESCOM found many units that fluctuate in and out of POMCUS and/or to a different POMCUS set over time. DESCOM also found USAREUR units that have a ROBCO identifying them as a POMCUS units.
20. DESCOM (DRSDS-LDD)	Accuracy Timeliness	Data elements that have an inherent relationship are not being updated based on proper logic.	During the analysis of the POM LOGSACS of Dec '78, it was discovered that certain units have their ADCON (RDD) field changed to indicate an action within a certain timeframe; however, the DAMPL changes which should correspond to the same timeframe, identify a different timeframe.
21. DESCOM (DRSDS-LDD) RDAISA	Accuracy	LOGSACS contain detail records for units but no header records and unit header records with no detail records.	Both DESCOM and RDAISA have identified this problem in nearly all LOGSACS tapes. Before they can use the LOGSACS data, these conditions must be corrected. For example, 54 tanks in a battalion dropped out had to be adjusted by SHN.
22. RDAISA	Accuracy	LOGSACS tapes are received with errors in the data.	Some units do not have ADCONS. Units have invalid ADCONS assigned. There are also breaks in some of the EDATES and TDATES which create problems in computing the IIQ/AAO.
23. RDAISA	Timeliness	LOGSACS tapes are late in arriving at RDAISA.	When the tapes are late in arriving it delays the schedule for computing the IIQ/AAO. Normally, the IIQ/AAO computations take 3 weeks. This time is needed to do a proper audit and data quality check on 6,000 to 7,000 line items. For example, the LOGSACS was due on 1 Dec 78, it arrived on 15 Dec 78--the ADD was due out on 22 Dec 78. Consequently, little time remained to audit, check, correct, and also process reports.
24. RDAISA	Accuracy	TOE match step for the LOGSACS file was not accomplished.	When review of the LOGSACS tape was accomplished it was found that the TOE match had not been accomplished for the required units. A new file had to be provided to RDAISA
25. RDAISA	Accuracy	BOIP data added to LOGSACS was not always complete.	Records which have been amended to include BOIP data do not always contain complete/necessary support equipment.
26. EARA (DRXEA-PP)	Timeliness	Many requisitions for equipment received by MRC must be referred to EARA for authorization validation.	EARA receives approximately 350 to 400 requests per month for validation of authorizations from the MRCs. Of these, an average of 165 involves incorrect LIN and 25 involves incorrect UICs. The majority of the problems are a result of changes that have been submitted and approved but take from 90 to 270 days for the data to reflect in LOGSACS, and the H-530 tape prepared at DESCOM and provided MRC. In the meantime, the using activity has submitted a requisition for the required equipment.

APPENDIX I

FORDIMS CONTRIBUTIONS TO SACS IMPROVEMENTS

APPENDIX I

SUBJECT: FORDIMS Contributions to SACS Improvements

PROBLEM STATEMENT: FORDIMS is being developed to replace AFP, CBS, FAS, and HQDA TAADS. In this process some changes have been made in data element record structures and processing which require specific consideration of SACS implications.

EXPLANATION/CAUSATIVE FACTORS:

Background. The following previously separate, major HQDA management information systems (MIS) are being integrated to form FORDIMS:

- The Army Force Program (AFP),
- The Civilian Budgeting System (CBS),
- The Force Accounting System (FAS), and
- The HQDA portion of the Army Authorization Document System (TAADS).

FORDIMS Objectives. The basic objectives of FORDIMS are to:

- a. Provide more accurate and timely force structure and manpower management data to the Army Staff.
- b. Automate the production of manpower reports and maintenance of manpower records previously produced and maintained manually by the DA Staff.
- c. Eliminate the redundancy of data in the HQDA force structure and manpower management data base.
- d. Provide a means for maintaining a logical and auditable relationship among force structure and manpower data in Program Budget Guidance, budget exhibits, the FYDP, the Master Force, the Manpower Requirements Report, and authorization documents.
- e. Reduce USAMSSA's system maintenance requirements by providing greater flexibility for system modifications.

FORDIMS Concepts. The approach used to achieve the above objectives was to integrate four existing systems (listed above) using the TOTAL data base management system (DBMS). The TOTAL DBMS provides an integrated capability to relate data between files so that update transactions and retrieval logic can operate across file boundaries. Integration helps reduce redundancy through the elimination of unnecessary duplication of data elements. From the functional user's standpoint, FORDIMS can be viewed as a single integrated file that is composed of three separate subsystems. Through use of the DBMS, complex interfile relationships can be maintained, allowing for flexible retrievals and rapid response to user ad hoc requests.

The AFP and CBS systems performed closely related functions and have been consolidated into one logical system. However, HQDA TAADS, FAS, and the consolidated AFP/CBS systems have their own unique sets of functional requirements and functional processes to support, with certain common data relationships (and related functions) existing among them. FORDIMS integrates these four systems in a DBMS environment as three separate subsystems, using the capabilities of the DBMS to establish their logical file and record relationships. The subsystems are:

- The Program/Budget Subsystem (P/BS), which will replace the Army Force Program (AFP) and Civilian Budget System (CBS).
- The Force Structure Subsystem (FSS), which will replace the Force Accounting System (FAS).
- The Authorization Subsystem (AS), which has replaced the HQDA portion of The Army Authorizations Document System (TAADS).

The AS became operational in September 1977. The P/BS and FSS are scheduled to become operational by the end of calendar year 1979.

Discussion. As indicated above, two of the three subsystems that constitute FORDIMS are still being designed and developed. Until such time as all aspects of these subsystems are developed and implemented, their precise impact on the capability of ODCSOPS to produce the PERSACS

and LOGSACS will be subject to conjecture. At this point in time, it appears that although some benefits will certainly be derived from FORDIMS, these three subsystems will not provide solutions to all existing SACS problems, and in some instances, they may create some new problems. It should be noted, however, that FORDIMS was not conceived as a solution for all that is wrong with SACS. Indeed, SACS was not mentioned in the stated FORDIMS objectives (see above).

From the SACS user's standpoint, the principal sources of benefits that can reasonably be expected to be derived from the implementation of FORDIMS are:

- *Guidance Tracking*
- *Improved Accuracy of Data*
- *Improved Timeliness of Data*

Although each of these sources of potential SACS benefits is discussed separately below, the fact that these three areas are *not* mutually exclusive must be recognized at once. For example, "Guidance Tracking" should contribute to both "Improved Accuracy of Data" and to "Improved Timeliness of Data."

Guidance Tracking. Guidance tracking is the process of establishing and maintaining an audit trail which will enable HQDA to identify the nature of and reasons for changes in Army force structure and manpower from one point in time to another, and to verify the status of field implementation of directed changes at the level of detail necessary to satisfy HQDA management and higher authority reporting requirements. This includes accounting for changes in the force structure as well as changes in manpower authorizations and related funding data by:

- Reason for change (e.g., Program Decision Memorandum (PDM), Decision Package Set (DPS), headquarters reduction, tank conversion, etc.)
- Funding classification (Army Management Structure code, program element, subprogram, program, appropriation, and Defense Planning and Programming Category)

- Military/civilian personnel classification
 - Military identity (officer, warrant officer, and enlisted)
 - Civilian identity (direct hire US, direct hire foreign national, and indirect hire)
 - Civilian type (e.g., US Graded, US Wage Grade, etc.)
- Organization (Resource Command (RCOMD), Major Command/Agency (MACOM), and UIC)

Guidance Tracking will enable the ARSTAF to ensure that a logical relationship exists among manpower data in the three subsystems of FORDIMS. The data edits and compares, associated with guidance tracking, will ensure that programmed authorized manpower in FICOD F of the Master Force in the FSS plus that in the RCOMD Management Accounts equals that allocated to commands and recorded in the P/BS. These edits and compares will also ensure that manpower reflected in authorization documents in the AS equals the manpower programmed for each unit in the FSS. Thus, it will be possible to determine the reasons for differences between the programmed and documented strength portions of a unit and HQDA managers will be able to insist upon prompt action by MACOMs to include directed manpower actions in their Command Plans (and, hence in the Master Force) and in their authorization documents. Guidance tracking should, therefore, reduce the need for "assumptions" on the part of force managers as to how the MACOMs will spread manpower changes to units; reduce the number of differences between the programmed and documented positions for a unit for which there are no known reasons at HQDA, and therefore reduce the need for factoring. Guidance Tracking will provide a capability for instilling discipline in a system that is presently largely undisciplined. However, it will not completely eliminate the need for factoring because the latest documented manpower position for a unit will not always reflect the latest programmed position for that unit.

Improved Accuracy of Data. Improvements in the accuracy of data obtained from FORDIMS can be expected to result from several aspects of FORDIMS' design, as follows:

- Improved edits
- Data element standardization
- Use of the TOTAL DBMS
- Derivative benefits of guidance tracking

Improved Edits. FORDIMS has increased the scope of data element *value edits*, as compared to existing systems. Some syntax and relationship edits are also being implemented. However, the exact edit programs and criteria being built into FORDIMS are currently documented only in working program specifications.

Value edits are currently being programmed for the following data elements in one or more FORDIMS subsystems.

<u>Data Element Name</u>	<u>Mnemonic</u>	<u>FORDIMS Subsystem</u>
Army Management Structure Code	AMSCO	AS
Army Location Code	ARLOC	FSS
Branch of Service Code	BRNCH	FSS
DA Master Priority List	DAMPL	FSS
DA Programing Priority List	DAPPL	FSS
Force Identification Code	FICOD	FSS
General Officer Command	GOCOM	FSS
Line Item Number	LINUM	AS
Major Command Code	MACOM	FSS and AS
Major US Army Reserve Command	MARCM	FSS
Military Occupational Specialty Code	MOSCO	AS
Resource Command	RCOMD	FSS
Subcommand Code	SBCOM	FSS
Standard Requirements Code	SRCOD	FSS and AS
Unit Status Code	STATS	FSS
Unit Identification Code	UICOD	FSS and AS
Unit Level Code	ULCCC	FSS

Data Element Standardization. Considerable work has been done on the standardization of data elements in the three subsystems of FORDIMS. This work is reflected in the data element dictionaries which are included in each volume of the FORDIMS User's Guide as Appendix F.

Use of the TOTAL DBMS. FORDIMS files are being linked, stored, and, in part, manipulated by the TOTAL data base management system. This should improve the ease of handling data (input and retrieval) and contribute to improved data accuracy and the ease of producing new reports.

Derivative Benefits of Guidance Tracking. (See discussion of Guidance Tracking, above.) FORDIMS will provide, for the first time, a means for ensuring that the manpower allocated to commands is the same as that reflected in the Army Master Force and in MTOE and TDA authorization documents.

Improved Timeliness of Data. Expected improvements in the timeliness of data output by FORDIMS depend greatly on anticipated improvements in HQDA management capabilities as a result of Guidance Tracking. Determination of the extent to which these improvements will actually be realized must, of course, await the full implementation of FORDIMS and Guidance Tracking. However, FORDIMS will provide a means to check on the progress of implementation of manpower guidance. If MACOMs are late in reflecting guidance in their VFAS Command Plan submissions and/or in documenting guidance in their VTAADS submissions, that tardiness will be apparent in FORDIMS reports and HQDA managers can take appropriate action

Continuing Problems. Existing problems (of the current systems) which will either not be greatly affected or will not be affected at all by the implementation of FORDIMS are outlined below:

- Input scheduling. Daily HQDA updates of Force Structure Subsystem data will continue with monthly VFAS exchanges of MACOM data as FSS input. The twice yearly MOC 90-day window will remain unchanged for VTAADS input to the AS. No significant changes in the flow of other data are anticipated.

- Factoring. Some factoring will still be required (see above).
- Data management. Although responsibilities for specific data elements are being assigned to specific ARSTAF divisions, some data elements are, of necessity, assigned to two or more divisions. Thus, current ARSTAF data management problems can be expected to continue.
- Edits. In establishing the initial FSS data base from FAS, an edit table which relates UICOD/COMPO/RCOMD/MACOM/SBCOM will be employed. Thereafter, however, it will not be used. The accuracy of those data elements relating together will be the responsibility of the data element proponent, at time of input, as specified in the FSS User's Guide. FSS and AS do not have specific compatibility edits of relationship values for these or other data elements. There will also be no edit to ensure the correct relationship between ADCON and DAMPL/DAPPL, nor will there be an edit to ensure that unit ADCON changes follow logical progression. FORDIMS will not edit POMCUS unit identification for consistency over time to ensure that the same unit(s) does not fluctuate in and out of POMCUS status within short time periods (reported by DESCOM as a problem with the LOGSACS provided on 15 December 1978).¹

It should be noted that none of the edits suggested above are in current systems, and HQDA functional users have not requested such edits nor established the necessary criteria/relationships to allow them to be programed in FORDIMS.

Potential New Problems. At this point in time, inasmuch as FORDIMS has not been completely developed and implemented, the identification of possible new problems is largely a matter of conjecture. However, the following appear to be potential problem areas:

¹ FACTSHEET, 26 December 1978, DRSDS-LDD, paragraph 2b.

AD-A067 715

GENERAL RESEARCH CORP MCLEAN VA OPERATIONS ANALYSIS GROUP F/G 5/1
ANALYSIS TO DETERMINE FUNCTIONAL AND SYSTEMS REQUIREMENTS FOR A--ETC(U)
MAR 79 F O DEPPNER, J J ANDERSON, J I POSNER MDA903-78-C-0445

UNCLASSIFIED

1070-02-79-CR

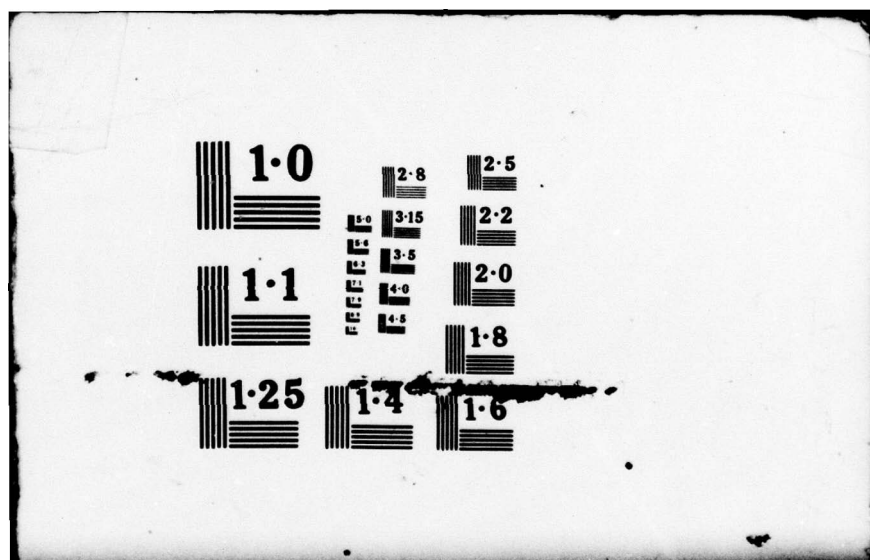
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- Software. The USAMSSA SACS programs to freeze and load files must be changed to function with P/BS and AS formats or the P/BS and AS formatted data must be converted to FAS and TAADS formats.
 - SIGMA programs function with FAS, TAADS, and TOE formats. A similar conversion problem exists.
 - SACS programs will not function with FSS and AS formats. A similar conversion problem exists.
 - New programs may be required to select and merge FICOD F and P records.
- Conversion. Since the aforementioned software has not been modified to utilize the FSS and AS formats, data conversion from FSS and AS formats to FAS and TAADS formats is required. In this conversion process, it is likely that turbulence will be introduced. A case in point was the omission of detail data for some units in the October 1978 LOGSACS and PERSACS which was traced to the AS conversion to TAADS format.
- Force Selection. Under FORDIMS, the Master Force will be composed of FICOD F, the "resources" force, and FICOD P, the planned force. The Master Force will consist of FICOD F, except where FICOD P data exists, in which case it will overlay FICOD F data in the Master Force. This interjects the possibility of (a) confusion in selecting the SACS Force, and (b) of total PERSACS manpower and equipment requirements that exceed OSD and Congressional constraints, since FICOD P will not be "resources."

The foregoing statements are considered to be conservative, but generally identify the areas in which problems can be anticipated during the complete conversion to FORDIMS software and data.

IMPACT: SACS will experience turbulence during the conversion from FAS and TAADS to FORDIMS software and data. SACS processing will require close scrutiny during and after conversion to FORDIMS. Data timeliness and accuracy should not deteriorate significantly during the conversion period. Subsequent to the conversation period, the quality of SACS data may be expected to improve to some extent, however, major improvements in SACS processes and software will be needed if DA timeliness and accuracy objectives are to be met.